Kodak Professional

DCS 500 Series Digital Cameras



User's Guide

for DCS 500 Series Digital Cameras

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CAREFULLY READ THE FOLLOWING WARRANTY TERMS AND CONDITIONS BEFORE USING YOUR CAMERA. USE OF YOUR CAMERA INDICATES YOUR ACCEPTANCE OF THESE TERMS AND CONDITIONS. IF YOU DO NOT AGREE WITH THEM, PROMPTLY RETURN THE CAMERA, UNUSED, ALONG WITH THE ACCOMPANYING MATERIALS, IN THE ORIGINAL PACKAGING.

WARRANTY

KODAK PROFESSIONAL DCS 500 Series Cameras

THIS WARRANTY APPLIES ONLY TO EQUIPMENT PURCHASED IN THE UNITED STATES.

Warranty Time Period

Kodak warrants your KODAK PROFESSIONAL DCS 500 Series Camera to be free from defects in material and workmanship for 1 year or 100,000 shutter activations from the day of purchase (whichever comes first).

Warranty Repair Coverage

If this equipment does not function properly during the warranty period due to defects in material or workmanship, Kodak will, at its option, either repair or replace the equipment without charge, subject to the conditions and limitations stated herein. Such repair service will include all labor as well as any necessary adjustments and/or replacement parts.

If replacement parts are used in making repairs, these parts may be remanufactured, or may contain remanufactured materials. If it is necessary to replace the entire system, it may be replaced with a remanufactured system. Repair or replacement carries a 30 day warranty effective at the time of service problem resolution. This warranty will not extend the original warranty period, and in the case of parts replacement, will only apply to parts and labor performed to repair the equipment.

Limitations

REPAIR OR REPLACEMENT WITHOUT CHARGE IS KODAK'S ONLY OBLIGATION UNDER THIS WARRANTY.

Warranty service will not be provided without dated proof of purchase. Please return the Warranty Registration card within 30 days of purchase.

As a condition of warranty service, before sending in your equipment to a Kodak authorized service center for repair, you must first contact a Kodak representative for return authorization and instructions.

Should you need to return equipment to Kodak, Kodak is not responsible for the loss or damage of equipment while in transport to a Kodak authorized service center. You may, at your option, choose to insure equipment for loss or damage with the carrier of your choice.

This warranty becomes null and void if, during shipment, you fail to pack your Kodak Professional DCS 500 Series Digital Camera in a manner consistent with the repacking instructions.

This warranty does not cover the following:

- ✔ circumstances beyond Kodak's control
- ✔ service or parts to correct problems resulting from the use of attachments, accessories or alterations not marketed by Kodak
- ✔ unauthorized modifications or service
- ✔ misuse
- ✔ abuse
- ✔ failure to follow Kodak's operating, maintenance, or repacking instructions
- ✔ failure to use Kodak supplied items (such as cables).

KODAK MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED, AND SPECIFICALLY DISCLAIMS THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

KODAK WILL NOT BE RESPONSIBLE FOR ANY CONSEQUENTIAL OR INCIDENTAL DAMAGES RESULTING FROM THE PURCHASE, USE, OR IMPROPER FUNCTIONING OF THIS EQUIPMENT EVEN IF THE LOSS OR DAMAGE IS CAUSED BY THE NEGLIGENCE OR OTHER FAULT OF KODAK. SUCH DAMAGES FOR WHICH KODAK WILL NOT BE RESPONSIBLE INCLUDE, BUT ARE NOT LIMITED TO, LOSS OF REVENUE OR PROFIT, DOWNTIME COSTS, LOSS OF USE OF YOUR CAMERA, COST OF ANY SUBSTITUTE EQUIPMENT, FACILITIES, OR SERVICES, OR CLAIMS OF YOUR CUSTOMERS FOR SUCH DAMAGES.

Outside the United States

In countries other than the United States, warranty terms may be different. Unless a specific Kodak warranty is communicated to the purchaser in writing by Kodak, no warranty or liability exists even though defect, damage or loss may be by negligence or other act of Kodak.

How to obtain service

In the United States, call 1-800-23-KODAK (1-800-235-6325).

In Canada, call 1-800-GO-KODAK (1-800-465-6325).

In other countries, call your nearest Kodak representative.

If service is required, your Kodak representative will instruct you to return the unit to the nearest service center for repair and will issue a return authorization number.

When returning a KODAK PROFESSIONAL DCS 500 Series Camera for repair, the unit should be packed in its original packing materials according to the repacking instructions located on the shipping container. The problem report form, located at the back of this manual, should also be completed and enclosed with your camera. If the original packaging has been discarded or is not available, packing will be the purchaser’s responsibility.

Return of the repaired or replaced equipment to the customer can be expected five to seven business days from the date the equipment arrives at the service center.

Product Support Options

During the warranty period for the Kodak Professional DCS 500 Series Camera, you are entitled to product support for both hardware and software, provided your camera is registered with the Eastman Kodak Company. You may register with Eastman Kodak via mail.

Support is provided through a variety of options:

1. Technical support through the Web site: (http://www.kodak.com):

   ✔ Support includes FAQs (Frequently Asked Questions), downloadable software updates, and technical topic articles for reading and downloading.

2. FaxBack Documents on a variety of subjects. The FaxBack system is available at the following phone number:

North America	1-800-508-1531

3. Authorized Dealers:

   Contact your authorized Kodak Professional dealer for help with camera operation and connection to your computer. Many dealers can also provide training for your graphics application software, integration consulting, and supporting equipment. Authorized dealers can also provide help in purchasing a service maintenance agreement.

4. Telephone Support:

   Currently, telephone support is provided without charge during your warranty period only. Your camera must be registered with Eastman Kodak to qualify for no-charge support. You will be asked to provide the serial number of your camera and proof of purchase may be requested to verify the current status of your warranty. Cameras found to be out of warranty will require a credit card payment for each call incident. There is no charge to register your camera with Eastman Kodak Company.

United States:	Call 1-800-23-KODAK (1-800-235-6325)
Outside United States:	Contact your local Kodak service representative

5 Out-of-Warranty Support Options

There will be a charge for call incidents if you wish to speak to a Kodak support representative. A call incident is defined as only those issues raised during the first telephone or email contact. Follow-up telephone calls by Kodak's representative, and callbacks to Kodak's Support Center to resolve the call incident will not be charged, provided a valid, active call number is provided. Calls to report bugs or anomalies will have any charges cancelled. Calls to arrange for service will have the charges cancelled or applied as a credit against the repair estimate or invoice.

Service maintenance agreements, which cover the repair and support of the DCS 500 Series camera and software are available. Please contact the regional Service Marketing group at:

North America 1-800-645-6325

No-charge options include:

- Kodak Professional World Wide Web site: http://www.kodak.com/KodakProfessional
- FaxBack system documents
- Kodak Professional dealer where you purchased this product.

Table of Contents

Important Information 1-1

System Requirements for your Computer..... 1-2

MACINTOSH 1-2

WINDOWS 1-2

Warnings..... 1-3

Important Safeguards and Precautions..... 1-4

Electromagnetic Emissions..... 1-7

VCCI Statement..... 1-7

About Your Camera 2-1

Features..... 2-1

Nomenclature..... 2-3

Camera Front 2-3

Camera Back 2-4

Camera Top 2-5

Camera Bottom 2-5

Camera Sides 2-6

Open Battery/PC Card Door 2-7

Top LCD Panel 2-8

Back LCD Panel 2-9

Image Display 2-9

Navigation Techniques 2-11

Status Bar 2-13

Viewfinder 2-14

Using the Quick Control Dial 2-15
Using the Quick Control Dial For Digital Functions 2-15
Using the Quick Control Dial For Non-digital Functions 2-16
Buttons 2-17
Attaching the Lens 2-18
Removing the Lens 2-19
The Imager 2-20
Anti-aliasing filter 2-20
IR Filter 2-20
Illuminating the LCD Panels 2-21
Camera Straps 2-22
Attaching the Neck Strap 2-22
Attaching the Hand Strap 2-22
Attaching the Hand Strap and Neck Strap 2-24
Powering Your Camera 3-1
Turning the Camera On and Off 3-1
Batteries 3-2
Inserting/Removing Batteries 3-3
Checking Battery Status 3-5
Battery Charger 3-6
To Charge Batteries 3-7
Conditioning 3-9
Battery Conservation 3-10
PowerSave Mode 3-10
Six Second Timeout 3-10
Situations Using Extra Battery Power 3-10
Image Display Timeout 3-11

AC Adapter 3-12
Connecting the AC Adapter 3-13

Using PC Cards 4-1

PC Cards 4-1
Dual Slots for PC Cards 4-2
Inserting/Removing PC Cards 4-3
Formatting a PC Card 4-6
Selecting a PC Card or Folder 4-8
Selecting a PC Card or Folder 4-8

Saving Files 5-1

JPEG and TIFF File Processing 5-1
Processing with Two PC Cards 5-1
Processing Images 5-2
Changing Processing Settings 5-5
Working with TIFF Custom Files on your Computer 5-7
IPTC Data Management 5-8
Loading IPTC Data from a PC Card 5-9

Configuring Your Camera 6-1

Date and Time 6-1
Dioptric Adjustment of the Viewfinder 6-2
Custom Functions 6-3
Selecting and Setting Custom Functions 6-3
Resetting Individual Custom Functions 6-5
Resetting All Custom Functions At Once 6-5
Custom Function Chart 6-6
Resetting the Camera to Its Initial Settings 6-19

Resetting All Camera Functions 6-19
Resetting All Custom Functions 6-20
Camera Properties 6-21
Setting Display Off Time 6-21
Enabling Sharpening 6-23
Setting File Resolution 6-24
Setting Powersave Time 6-25
Determining Total Actuations 6-25
Setting the Dropdown Menu Lag Time 6-26
Custom Functions 6-26

Quick Start 7-1

Before You Start 7-1
The AC Adapter 7-5
Optional Settings Before You Start 7-6
Setting White Balance 7-7
Selecting a PC Card or Folder 7-7
Capturing Images 7-9
Reviewing Images on Your Camera 7-10
Setting Display Contrast 7-11
Setting Display Options 7-12
Tagging Images 7-13
Deleting Images 7-14
Deleting a Single Image 7-14
Deleting More Than One Image 7-15
Associating a Sound File with an Image 7-16

Controlling Exposure and Color Balance 8-1

White Balance 8-1

Selecting a White Balance Setting 8-3
Using Custom White Balance 8-4
Setting the ISO 8-10
Selecting the Shooting Mode 8-11
Program AE Mode [P] 8-11
Shutter-priority AE [Tv] 8-14
Aperture-priority AE [Av] 8-17
Depth-of-Field AE [DEP] 8-21
Manual Exposure [M] 8-26
Bulb Exposure [buLb] 8-28
Selecting the Metering Mode 8-30
Evaluative Metering 8-31
Partial Metering 8-32
Fine Spot Metering 8-33
AE Lock 8-34
Exposure Compensation 8-37
Setting Exposure Compensation 8-37
Using the Exposure Compensation Button 8-39
Auto Exposure Bracketing [AEB] 8-40
Using Flash 8-44
General Information on Canon EOS Dedicated Speedlites 8-44
Using Canon EX-series Speedlites 8-45
Using Canon EZ, EG or E-Series Speedlites 8-50
Using Exposure Modes with E-TTL, A-TTL and TTL flash 8-52
Flash Exposure Compensation 8-54
External Automatic Flash Exposure Control with Speedlite 480EG 8-57
Manual Flash Exposure with Speedlites 540EZ, 480EG, 430EZ & 420EZ 8-57
Using Non-Dedicated Flash Equipment 8-58

Focusing 9-1

Selecting the AF Mode 9-2

One-Shot AF 9-2

AI Servo AF 9-3

Selecting the Five Focusing Points 9-5

Selecting a Focusing Point 9-5

Focus Lock 9-7

Difficult Subjects for Autofocus 9-8

Manual Focusing 9-10

Full-time Manual Focusing with USM Lenses 9-11

Checking the Depth of Field 9-11

Anti-aliasing Filter: Effect on Focus 9-12

Sharpening 9-12

Capturing Images 10-1

Shutter Button Operation and Autofocus 10-2

Pressing the Shutter Button Halfway 10-2

Pressing the Shutter Button Completely 10-3

Changing the Drive Mode 10-3

Single Exposure 10-3

Continuous Exposure 10-3

Maximum Continuous Shooting Speed in Different AF Modes ... 10-4

Using the Self-timer 10-5

Using the Eyepiece Shutter 10-6

Locking the Mirror Up 10-7

Using the Vertical Controls 10-9

Working with Images on the Camera 11-1

Image Review Mode 11-1
Setting the Review Mode 11-2
Reviewing Images 11-2
Adjusting Display Contrast 11-4
Selecting an Image 11-5
Setting Display Options 11-6
Tagging Images 11-8
Associating Sound Files With Images 11-9
Deleting Images 11-11
Deleting a Single Image 11-11
Deleting More Than One Image 11-12
Recovering Deleted Images 11-13

Connecting to Your Computer 12-1
Advantages to using an IEEE 1394 Connection 12-1
Advantages to using a Card Reader 12-1
Connecting Your Camera to the Computer 12-2
Quitting—Disconnecting from the Computer 12-4
Using the Card Reader 12-4

Transmitting Data 13-1
Connecting a Device to the Serial Port 13-1
Accessing Serial Port Options 13-2
Setting the Baud Rate 13-2
Serial In Mode 13-3
Serial In Status 13-4
Serial Out Mode 13-5
Image Transmit 13-6

Camera Care 14-1

Handling 14-1

Cleaning 14-2

Anti-aliasing and IR Filters 14-3

Removing, Cleaning, and Re-installing the Anti-aliasing Filter ... 14-3

The Imager 14-4

Determining if the Imager is Dirty 14-4

Cleaning the Imager 14-7

Reassembling the Camera 14-7

Storing 14-8

Top and Back LCD panels 14-8

Installing Camera Firmware on Your Computer 14-9

Updating Camera Firmware 14-9

Downloading From the PC Card 14-9

Appendix A - Specifications A-1

Appendix B - Troubleshooting B-1

Appendix C - Problem Report C-1



Important Information

Thank you for purchasing your new KODAK PROFESSIONAL DCS 500 Series Camera. This portable camera system, which combines technologies of Canon Inc. and Eastman Kodak Company, allows you to take and store high-resolution digital images of the highest quality. Before you start using the camera, follow the instructions listed below.

- ✔ Read the Warranty statement.
- ✔ Read the Software License Agreement associated with the software CD.
- ✔ Verify that your camera package contains everything mentioned in the list of Package Contents.
- ✔ Verify that your Macintosh or PC meets the System Requirements.
- ✔ Read the Warnings section.
- ✔ Review the Important Safeguards and Precautions.
- ✔ Send in the Warranty registration card.

In addition, you may want to review the list of optional accessories.

System Requirements for your Computer

The following sections list the required and optional computer hardware and software needed to run the DCS Host software for use with ADOBE PHOTOSHOP software on MACINTOSH, and TWAIN-compliant applications on the PC.

MACINTOSH

- ✔ 100 MHz Power PC processor with PCI bus slots for IEEE 1394 connection, and/or PC Card reader
- ✔ MACINTOSH OS 8.1or later system software (Macintosh OS 8.5.1 or later for a tethered camera)
- ✔ 64 MB RAM minimum allocated to PHOTOSHOP SOFTWARE
- ✔ 200 MB minimum free hard disk space
- ✔ IEEE 1394 adapter cards (if tethering camera without on-board IEEE 1394 port)
- ✔ 15 inch or larger color display (24-bit recommended)
- ✔ ADOBE PHOTOSHOP software version 4.0, 4.01, 5.0, or 5.5 (or software that supports PHOTOSHOP Acquire Plug-ins)

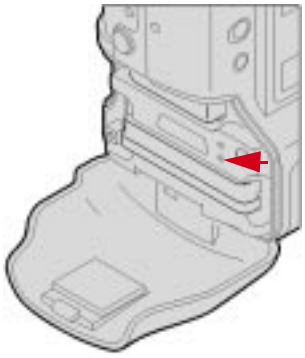
WINDOWS

- ✔ Personal computer with a 100 MHz Pentium processor with on-board IEEE 1394 port and/or PCI bus slots available and/or PC Card reader
- ✔ IEEE 1394 adapter cards (if tethering camera without on-board IEEE 1394 port)
- ✔ Windows 2000, Windows 98, or Windows NT 4.0 or later system software
- ✔ 64 MB RAM minimum
- ✔ 200 MB minimum free hard disk space
- ✔ Color display capable of 640 x 480 pixel resolution (or greater) True color (24-bit) is recommended
- ✔ Version 1.7 TWAIN-compliant software application such as ADOBE PHOTOSHOP software version 4.0, 4.01, 5.0, or 5.5

Warnings

- ✔ To prevent fire or shock hazard, use only the recommended accessories and attachments.
- ✔ Use extreme care when handling PC Cards, as they are easily damaged. If dropped, the PC Card may be destroyed, resulting in the loss of all data on the card.
- ✔ Do not remove a PC Card, battery, or AC adaptor from the camera while the Card icon on the Back LCD or the Card Busy light inside the Battery/PC Card door are blinking. The blinking indicates that data is being read from or written to the PC Card. You may lose data if you remove a card at this time. Refer to “PC Cards” on page 4-1.





- ✔ You should operate your camera only from the type of power source indicated on the name plate of the AC adapter. A line voltage outside of this range can destroy the AC adapter and/or the camera.
- ✔ Use only the supplied AC adapter. Do not plug other adapters into the camera.
- ✔ The AC adapter is for indoor use only.
- ✔ Do not use the supplied AC adapter for any purpose other than for the DCS 500 Series camera.
- ✔ The Battery/PC Card door should always be closed when you are capturing images. If a shock is applied to the camera, the battery may fall out causing loss of data if an image is currently being saved to the PC Card.

Important Safeguards and Precautions



The exclamation point in an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying your camera.

- ✔ **Read Instructions**—Read all the safety and operating instructions before operating your camera.
- ✔ **Follow Instructions**—Follow all operating and usage instructions.
- ✔ **Controls**—Adjust only those controls that are covered by the operating instructions.
- ✔ **Heed Warnings**—Heed all warnings on your camera and in the operating instructions.
- ✔ **Retain Instructions and Packaging**—Retain the safety and operating instructions for future reference. Retain the packing case for use if your camera needs to be shipped.
- ✔ **Handling**—Handle your camera with care. Treat the imager and the anti-aliasing filter as you would your best lens. Do not drop your camera. Do not place your camera on an unstable cart, stand, bracket, or table. It can fall, causing serious injury to persons and serious damage to your camera.
- ✔ **Dust**—If you operate the camera in environments with excessive dust levels, dust may accumulate on the camera.
- ✔ **Water and Moisture**— Do not use the camera in heavy rain or near salt spray and do not immerse your camera in water or other liquids. Do not use the AC adapter near water—for example, near a sink, or in a wet room or basement.

- ✔ **Object or Liquid Entry**—Never push foreign objects of any kind into your camera openings. The objects could touch dangerous voltage points or short out parts and cause a fire or electric shock. Never spill liquid of any kind on your camera.
- ✔ **Attachments**—Do not use attachments that are not recommended. The use of such attachments may cause hazards and serious damage to your camera.
- ✔ **Power Sources**—You should operate your camera only from the type of power source indicated on the name plate of the AC adapter. If you are not sure of the type of AC power that will be used, consult a dealer or local power company.
- ✔ **Overloading**—Do not overload power outlets and extension cords; this can result in a risk of fire or electric shock.
- ✔ **Cables**—Do not use cables other than those supplied with the camera. Use only the IEEE 1394 cable supplied with your camera to attach the camera to the computer. If you use other cables, you may violate FCC emission requirements.
- ✔ **Power-Cord Protections**—Route power-supply, and other cords, so that you are not likely to walk on them or pinch them with items placed on or against them. Pay particular attention to cords at plugs, receptacles, and the point where they leave your camera.
- ✔ **Grounding**—The AC adapter is equipped with a three-wire grounding-type plug with a third (grounding) pin. The three-wire plug will fit into a grounding-type power outlet. This is a safety feature. If you are unable to insert the plug into the outlet, contact an electrician to replace the outlet. Do not defeat the safety purpose of the grounding-type plug.
- ✔ **Lightning**—For added protection for your camera during a lightning storm, or any time when you will leave your camera unattended and unused for long periods of time, unplug the AC adapter from the power outlet and disconnect the camera from the computer. This will protect your camera from damage caused by lightning or power-line surges.
- ✔ **PC Cards**—PC Cards (not supplied with the camera) are fragile devices that can be damaged if not treated with care. Refer to the documentation accompanying any PC Card(s) you obtain to ensure that you are handling the PC Card as specified in that documentation, and that you are using the PC Card within its operating ranges for temperature, humidity, condensation, etc.

- ✔ **Humidity, Condensation**—We recommend operating your camera within the range of 8% to 85% relative humidity, non-condensing. If condensation occurs, added time may be required to read from or write to a PC Card. Condensation may be present if the camera system and/or PC Card(s) are moved from a relatively cold environment (like an air conditioned hotel room), into a warm, humid environment. We recommend that you allow sufficient time for the camera system and/or PC Cards to normalize within the specified environmental ranges before operation. (PC Cards may have more restrictive humidity ranges. Refer to the specifications that came with your PC Cards.
- ✔ **Servicing**—Do not attempt to service your camera yourself. Opening or removing covers may expose you to dangerous voltage or other hazards and void the warranty.
- ✔ **Damage Requiring Service**—Unplug your camera from the wall outlet and computer, and refer all servicing to the manufacturer under the following conditions:
  - If liquid has been spilled or if objects have fallen into your camera.
  - If your camera has been exposed to heavy rain or water. (While it is designed to tolerate a reasonable amount of water, it is not waterproof.)
  - If your camera does not operate normally according to the operating instructions.
  - If your camera has been dropped or the housing has been damaged.
  - When your camera exhibits a distinct change in performance.
- ✔ **Disassembling the Camera**—Never attempt to take the camera apart. The camera is shipped as a single unit. Do not disconnect the parts (except when cleaning a dirty anti-aliasing filter or imager as described on page 14-3.)

Electromagnetic Emissions

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning your camera off and on, you can try to correct the interference by one or more of the following measures:

- ✔ Reorient or relocate the receiving antenna.
- ✔ Increase the separation between your camera and receiver.
- ✔ Connect your camera into an outlet on a circuit different from that to which the receiver is connected.
- ✔ Consult the dealer or an experienced radio/TV technician for help.

This equipment conforms with the requirements of European Standard EN55022 with respect to radio interference for a Class B device.

Le present appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de la Classe B prescrites dans les règlements sur le brouillage redioélectrique édictés par le Ministère des Communications du Canada.

This digital apparatus does not exceed the class B limits for radio noise emissions from digital apparatus set out in the radio interference regulations of the Canadian Department of Communications.

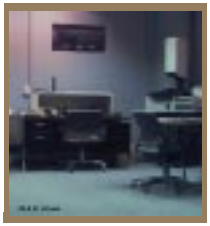
VCCI Statement

情報処理装置等電波障害自主規制について

この装置は、第二種情報装置（住宅地域又はその隣接した地域において使用されるべき情報装置）で住宅地域での電波障害防止を目的とした情報処理装置等電波障害自主規制協議会（VCCI）基準に適合しております。

しかし、本装置をラジオ、テレビジョン受信機に近接してご使用になると、受信障害の原因となることがあります。

取扱説明書に従って正しい取り扱いをしてください。



About Your Camera

Features

This manual describes the use of both the DCS 520 and the DCS 560 cameras. Any differences between the two models are noted.

Your camera provides a rich set of features that allows you to capture images of the highest quality. Your camera represents the merging of Canon and Kodak technologies.

These features vary, depending on your camera:

- ✔ Image size:
  DCS 520: 2 million pixels (1728 x 1152) 2:3 aspect ratio
  DCS 560: 6 million pixels (2008 x 3040) 2:3 aspect ratio
- ✔ Finished file size
  DCS 520: 6 MB
  DCS 560: 18 MB
- ✔ ISO:
  DCS 520: 200 - 1600
  DCS 560: 80 - 200
- ✔ Continuous frame rate:
  DCS 520: 3.5 frames/sec. If memory is full (burst depth of 12 is reached), the rate is temporarily reduced to .5 frame/sec.
  DCS 560: 1 frame/sec. If memory is full (burst depth of 3 is reached), the rate is temporarily reduced to .15 frame/sec.
- ✔ Burst:
  DCS 520: 3.5 frames/sec. burst for 12 images
  DCS 560: 1 frame/sec. burst for 3 images

These features are available on both the DCS 520 and 560:

- ✔ Enhanced White Balance functionality including ability to save White Balance settings
- ✔ An Intervalometer that sets your camera to capture a series of images automatically
- ✔ Ability to recover deleted images
- ✔ Global Positioning system that determines the exact latitude and longitude of the camera
- ✔ Color display of images with histogram and highlighted areas of overexposure
- ✔ Removable battery
- ✔ Dual active slots for PC Cards
- ✔ JPEG file processing that allows you to finish files on the camera (DCS 520 only)
- ✔ Lossless compression TIFF raw data files (12-bit data)
- ✔ IPTC data in image header
- ✔ Full image viewfinder
- ✔ Anti-aliasing filter to minimize color aliasing or IR filter to improve image quality
- ✔ Controls for vertical shooting
- ✔ Name plate that you can personalize
- ✔ Remote port connector for Canon accessories
- ✔ IEEE 1394 connection to computer (high speed serial bus)
- ✔ E-TTL flash control

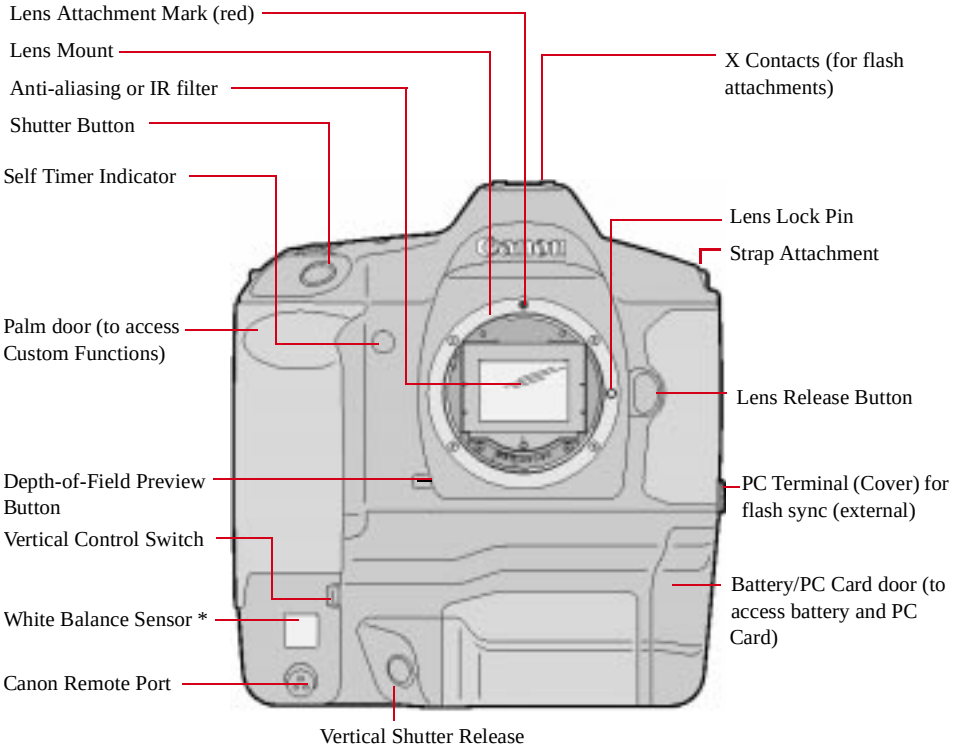
Your camera utilizes Canon EF lenses designed for 35 mm film frames. Since the imager in your camera is smaller than a 35 mm film frame, there will be a lens magnification or telephoto effect present. These effects are indicated below:

Model	Horizontal Dimension	Vertical Dimension	Diagonal Dimension	Lens Magnification Factor
35mm System	36.3	24.5	43.79	1
DCS 520	22.5	15.2	27.11	1.6
DCS 560	27.5	18.1	33.25	1.3

☞ The viewfinder is masked and magnified to provide corrected image framing.

Nomenclature

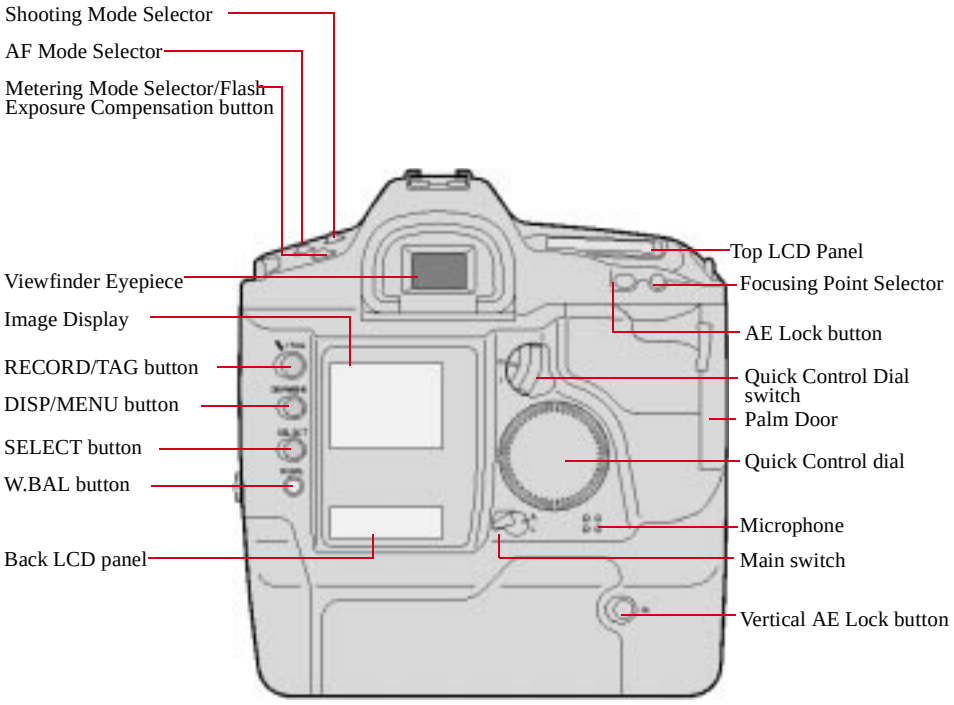
Camera Front

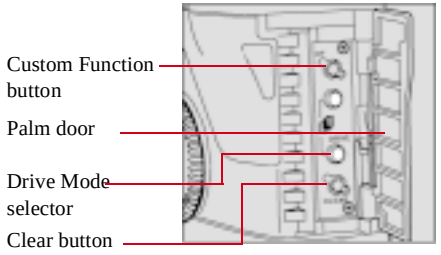


* With firmware version 3.09, or higher, white balance is accomplished using image data rather than the White Balance sensor.

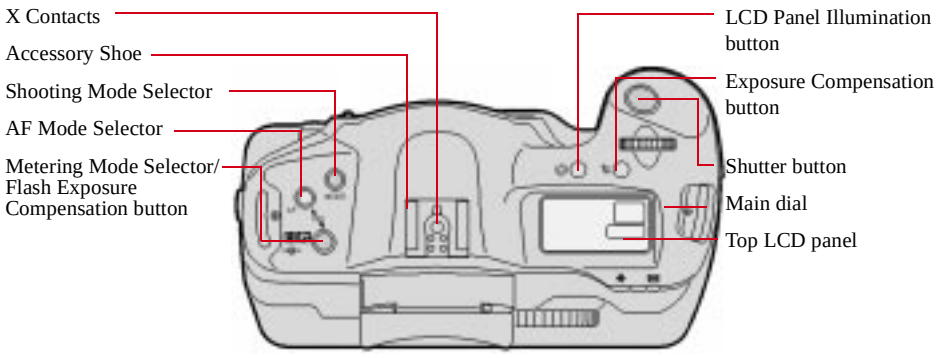
☞ An IR filter is included with the base camera kit. An anti-aliasing filter is included with the regular kit.

Camera Back

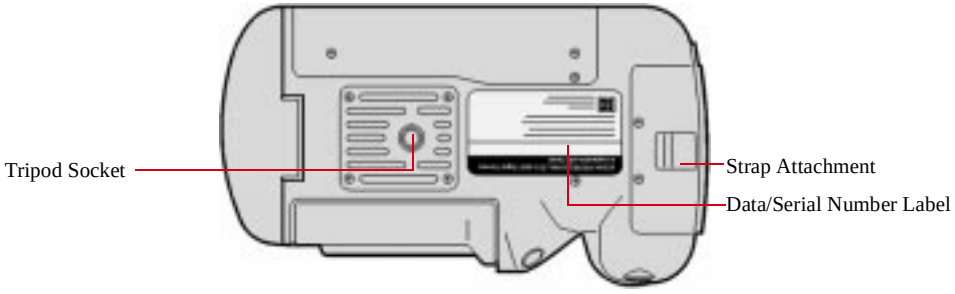

Shooting Mode Selector
AF Mode Selector
Metering Mode Selector/Flash Exposure Compensation button
Viewfinder Eyepiece
Image Display
RECORD/TAG button
DISP/MENU button
SELECT button
W.BAL button
Back LCD panel
Top LCD Panel
Focusing Point Selector
AE Lock button
Quick Control Dial switch
Palm Door
Quick Control dial
Microphone
Main switch
Vertical AE Lock button


Custom Function button
Palm door
Drive Mode selector
Clear button

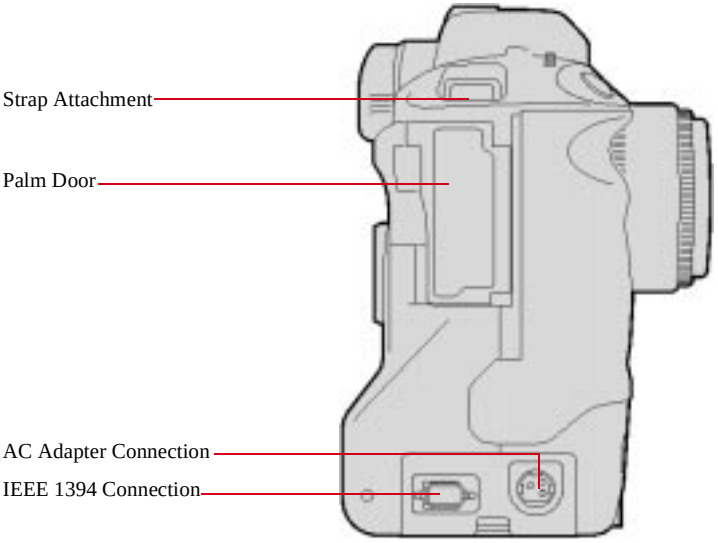
Camera Top

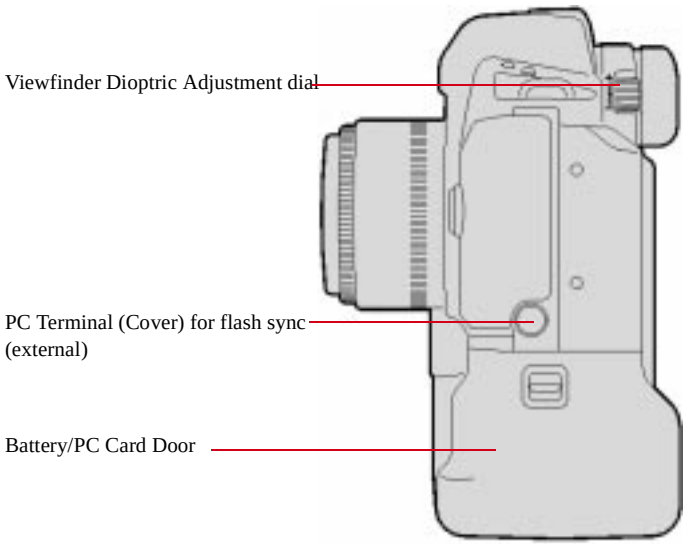


Camera Bottom

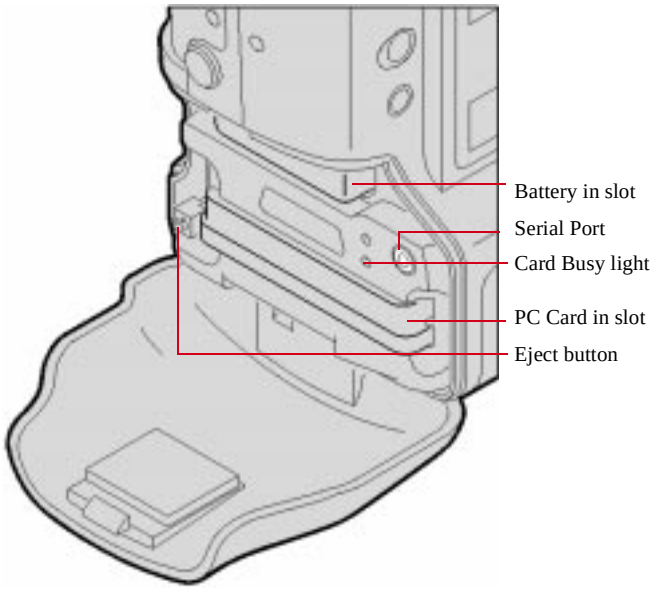


Camera Sides

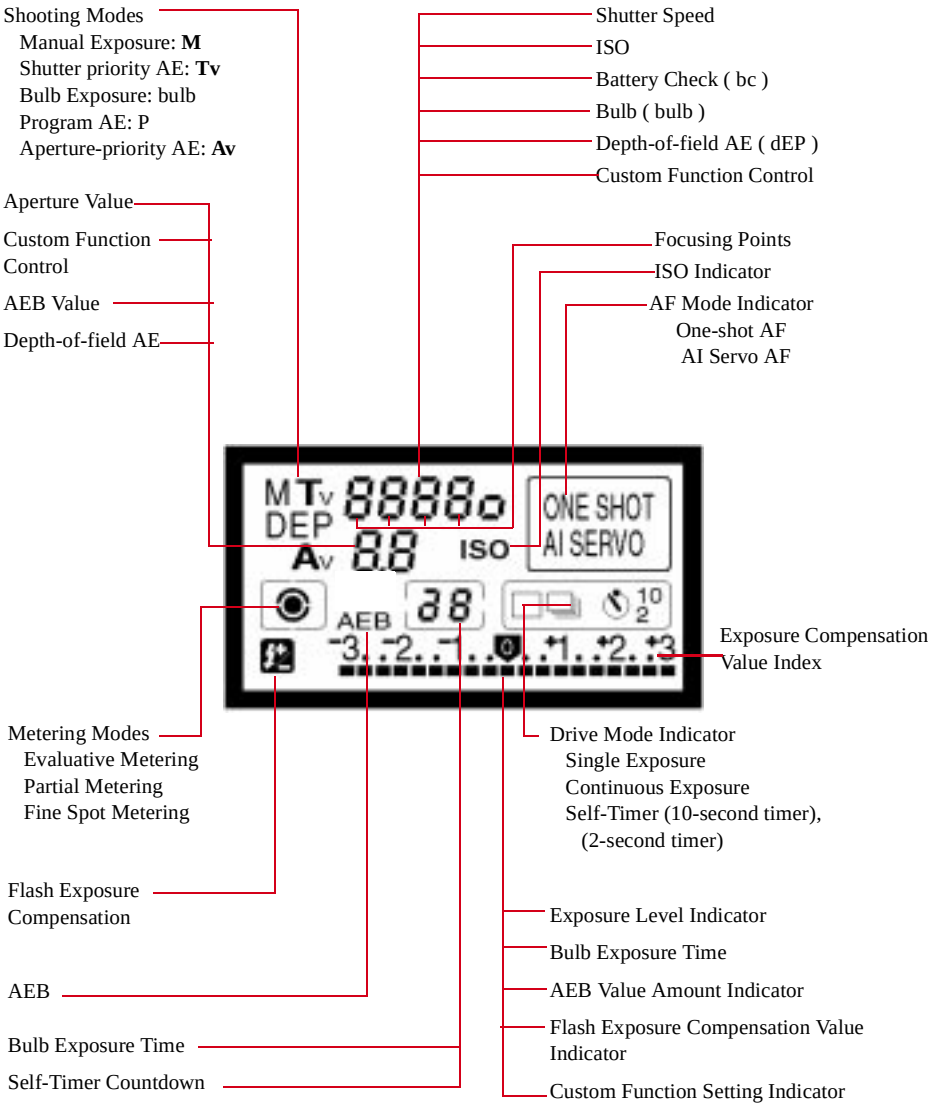




Open Battery/PC Card Door



Top LCD Panel



Back LCD Panel



Image Display

The Image Display has been designed for ease of use with maximized space for menu choices and image-related information.

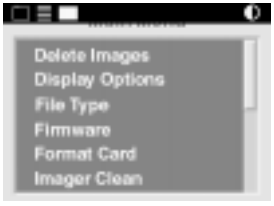
Menu Bar

The Menu bar is only displayed at your request. When you turn on the Image Display, the last screen used appears without the Menu bar. If you then press the DISP/MENU button, the Menu bar appears.

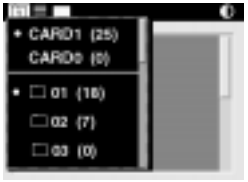
☞ Shortcut, press and hold the DISP/MENU button to turn on the Image Display and display the Menu bar.



When the Menu bar is displayed, the remainder of the screen is grayed-out.

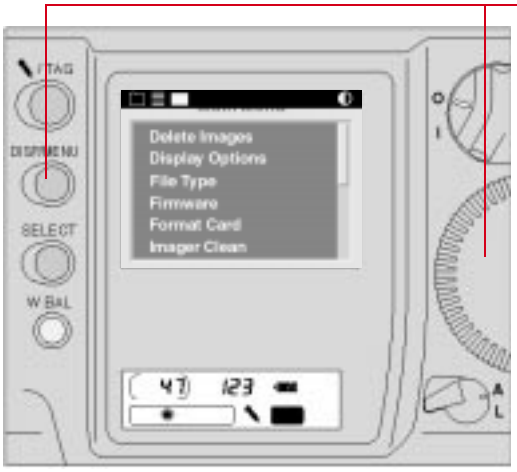


When you select a Menu bar icon, the following screens appear:

Icon		Function	Dropdown Menu
Folder icon		Displays the Folder dropdown menu.	One PC Card:  Two PC Cards: 
Menu icon		Displays a dropdown menu with choices for the Main, Properties, and Custom Settings menus.	
Display icon		Displays a dropdown menu with choices for Single, Four, and Nine Image Review mode.	
Contrast icon		Displays the Display Contrast screen where you can adjust contrast	

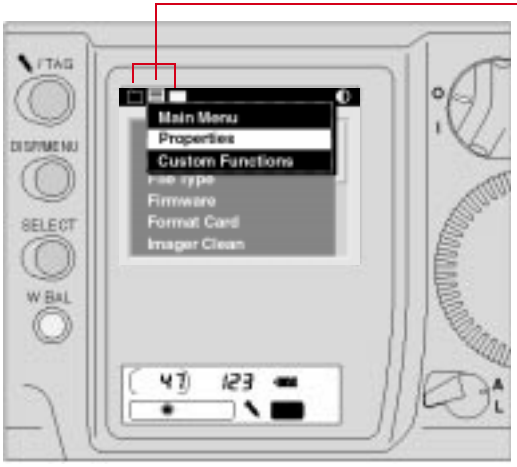
Navigation Techniques

Use the following guidelines when navigating the Image Display



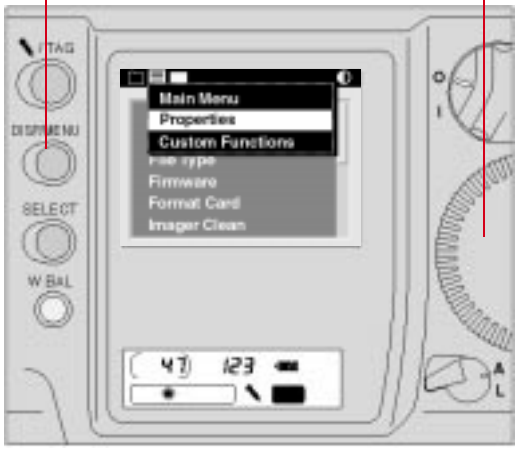
To display the Menu bar and select a Menu bar icon

Press and hold the DISP/MENU button and rotate the Quick Control dial until the desired icon is highlighted.



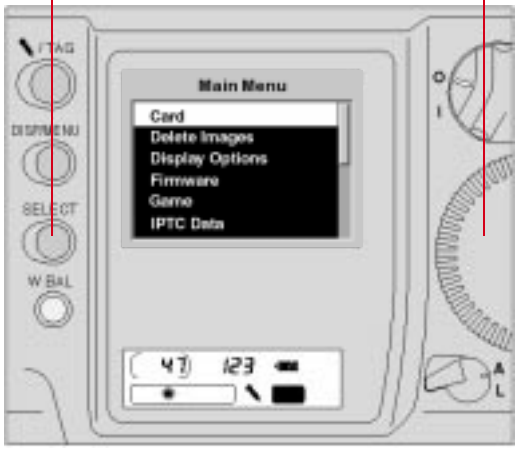
To display a Dropdown menu

Highlight the Folder, Menu, or Display icon, and continue pressing the DISP/MENU button until the dropdown menu appears.



To choose an item from a dropdown menu

Continue to press the DISP/MENU button and rotate the Quick Control dial until the desired menu choice is highlighted.



To chose an item from a menu screen

Press and hold the SELECT button and rotate the Quick Control dial to highlight your choice.

Status Bar

A Status bar appears whenever images are displayed (Single, Four, or Nine Image Review mode). Information about the currently selected image appears on the Status bar:

Two PC Cards



One PC Card



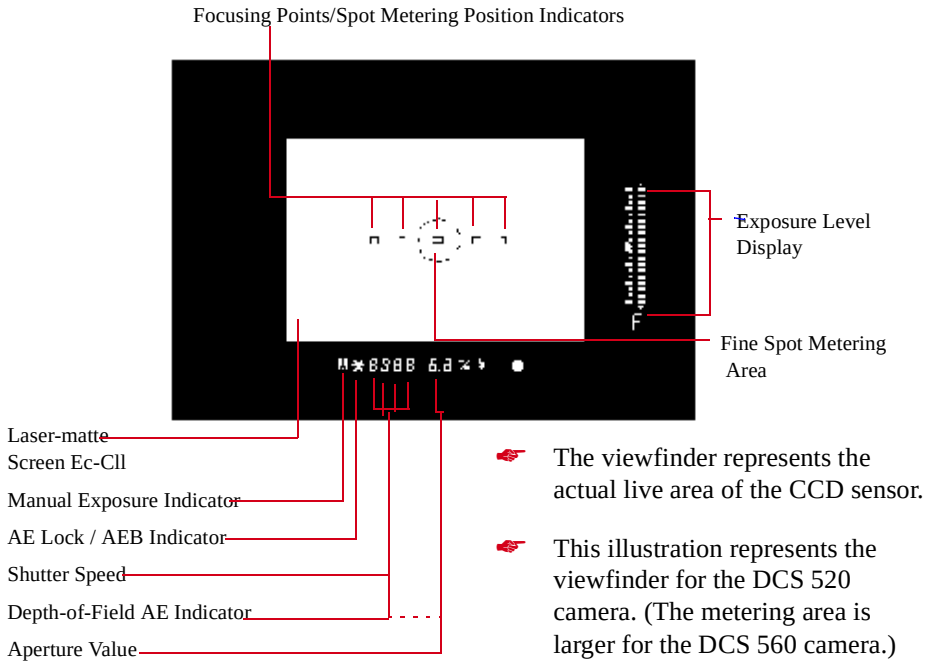
The currently active PC Card (if there are two cards in the camera)

The currently active folder

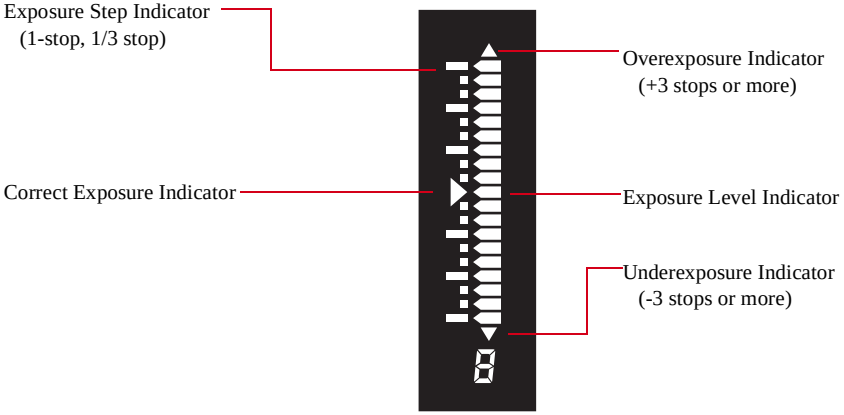
Sound icon (if one or more sound files are associated with the selected image)

Tag icon (if the selected image has been tagged).

Viewfinder



- The viewfinder represents the actual live area of the CCD sensor.
- This illustration represents the viewfinder for the DCS 520 camera. (The metering area is larger for the DCS 560 camera.)



Using the Quick Control Dial

The Quick Control dial works in two different modes.

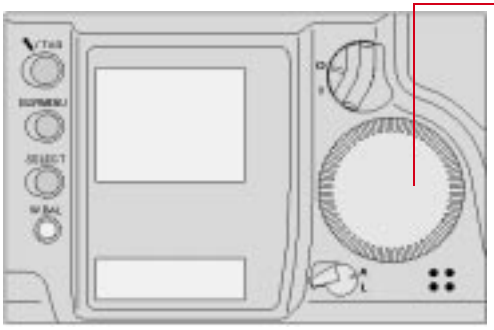
- ✔ When you use it in conjunction with the DISP/MENU button, the SELECT button, or the W.BAL button, you can access digital functions through the Image Display or the Back LCD panel.
- ✔ When you turn on the Quick Control Dial switch, and use the Quick Control dial without one of the buttons mentioned above, you can access a variety of non-digital functions (page 2-16).

☛ The Quick Control dial is disabled for a short period of time after each exposure. If you change a camera setting with the dial immediately after capturing an image, check that the camera responded appropriately.

Using the Quick Control Dial For Digital Functions

The Quick Control dial can access functions available through the Image Display or the Back LCD panel when you use it in conjunction with one or more of the following buttons:

- ✔ DISP/MENU button—Scroll through menu bar icons.
- ✔ SELECT button—Scroll through images or select menu options.
- ✔ W.BAL button—Select a White Balance option.

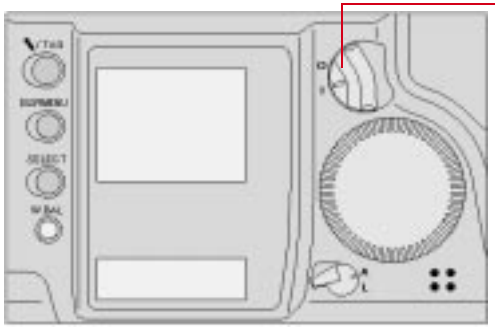


Press and hold one or more of the buttons listed above and rotate the Quick Control dial to access the desired digital function.

Using the Quick Control Dial For Non-digital Functions

The Quick Control dial is also available for other functions when the Quick Control Dial switch is set to the On position. These functions include:

- ✔ Exposure compensation (page 8-37)
- ✔ Manual exposure (page 8-26) and Bulb exposure (page 8-28)
- ✔ Flash exposure compensation (page 8-54)
- ✔ Custom functions F5 and F11 (page 6-3); Various combinations of these two functions modify the way you set shutter speed and aperture value.



1. Set the Quick Control Dial switch to On (|) to access the functions listed above.
2. Refer to the appropriate section of the manual for information on the desired functions.

   When finished, set the switch to Off (0), to avoid accidentally changing a camera setting.

Buttons

There are four buttons which access or change your camera's digital functions when used in conjunction with the Quick Control dial, the Image Display, and the Back LCD panel.

RECORD/TAG Button

- ✔ Press and release the button to tag (or untag) the currently selected image. For example, you can tag images that you do not wish to delete. Refer to "Tagging Images" on page 11-8.
- ✔ Press and hold the button and speak into the microphone to record a sound file and associate it with the current image. Refer to "Associating Sound Files With Images" on page 11-9.

DISP/MENU Button

- ✔ Press and release the button to turn the Image Display on or off.
- ✔ Press and hold the button and use the Quick Control dial to scroll through the menu bar icons.

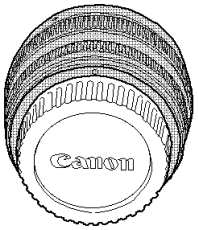
SELECT Button

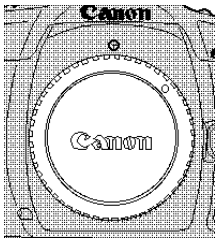
- ✔ Press and hold the button and use the Quick Control dial to scroll through images or menu options.
- ✔ Release the button to select the desired image or menu option.
- ✔ Hold down the DISP/MENU button and the SELECT button at the same time to turn the Image Display on and display a dialog box where you can delete the currently selected image. Refer to "Deleting a Single Image" on page 11-11.

W.BAL button

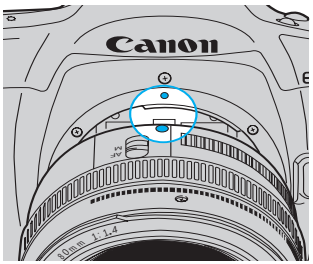
- ✔ Press and hold the button and use the Quick Control dial to select the desired White Balance icon on the Back LCD panel. If no White Balance icons are visible, then Custom White Balance is enabled. Refer to "White Balance" on page 8-1.

Attaching the Lens

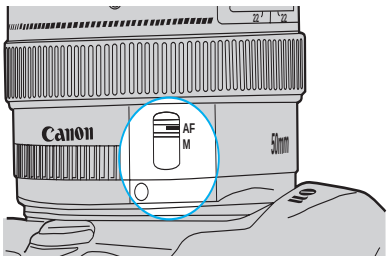




1 Remove the lens rear dust cap and the camera's body cap by turning them counterclockwise.



2 Align the red dots on the lens and camera body, then rotate the lens clockwise until it locks in place with a click.

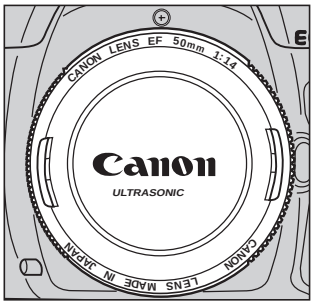


3 Set the lens Focus Mode switch to (**AF**).

☛ Autofocus is not possible when the switch is set to (**M**).

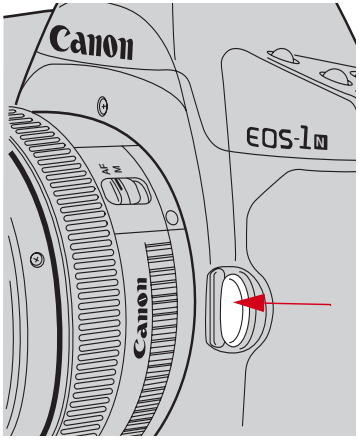
☛ During autofocusing, do not touch the rotating part of the lens.

☛ Some Canon lenses are manual focus only.



4 Remove the front lens cap.

Removing the Lens



To remove the lens, press the Lens Release button and turn the lens counterclockwise.

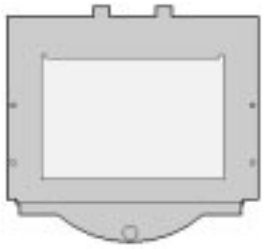
☛ When the lens is removed from the camera, place it face down on a stable surface to prevent damage to the electronic contacts.

The Imager

The imager is the component of the camera that records light when you capture an image. The DCS 520 imager is 2 million pixels and operates at 200 - 1600 ISO. The DCS 560 imager is 6 million pixels and operates at 80 - 200 ISO.

Anti-aliasing filter

Your camera contains an anti-aliasing filter which helps to prevent aliasing at certain focal distances.

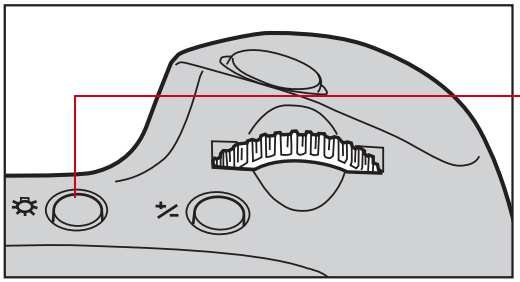


☞ Refer to page 9-12 for information on the effect of the anti-aliasing filter on focus.

IR Filter

The DCS 520 camera (base camera kit) uses an IR filter in place of an anti-aliasing filter.

Illuminating the LCD Panels

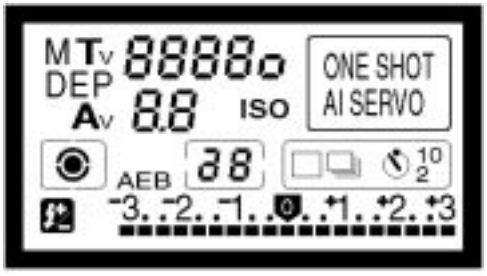


You can illuminate the Top and Back LCD panels for easy viewing at night or in low light situations. To do so, press the Panel Illumination button. The panels remain illuminated for approximately six seconds. To turn off the illumination before six seconds elapse, press the Panel Illumination button again.

The LCD panel illumination goes out automatically approximately two seconds after you capture an image.

- You can keep the Top and Back LCD panels illuminated longer than six seconds by pressing any operation button again while the illumination timer is activated.
- The LCD panels cannot be illuminated during bulb exposures.

Top LCD Panel



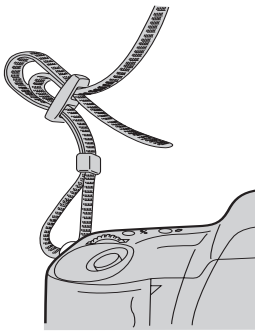
Back LCD Panel



Camera Straps

Two camera straps are included with your camera. You can attach either or both.

Attaching the Neck Strap

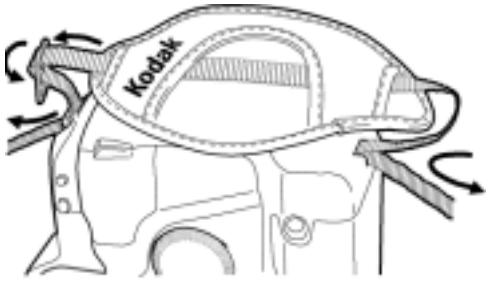


Thread the ends of the neck strap through the strap fixtures as shown. Pull firmly on the strap to make sure it is held securely by the buckles.

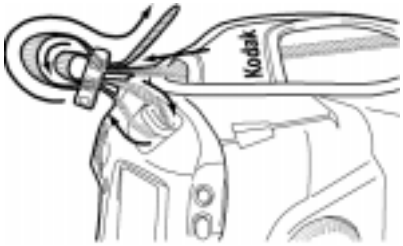
CAUTION: ⚠

If you are planning to use both the neck strap and the hand strap at the same time, follow the instructions for attaching both the hand strap and neck strap (described on page 2-24). Failure to attach the straps properly can cause the camera to drop.

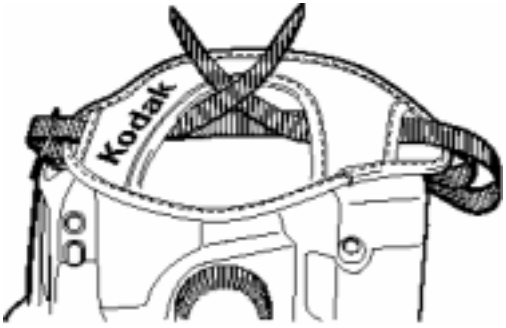
Attaching the Hand Strap



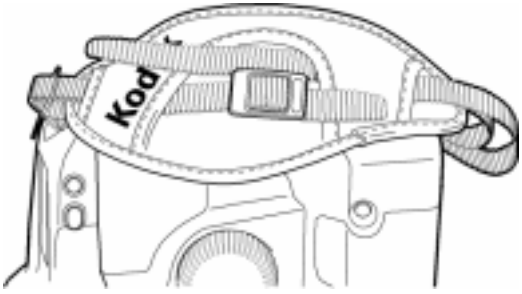
1. Thread the strap through both loops in the hand strap pad.
2. Place the three-holed buckle on the strap and thread through the camera's top strap fixture.
3. Thread the other end of the strap through the camera's bottom strap fixture.



4 Thread the top strap back through the buckle as shown.

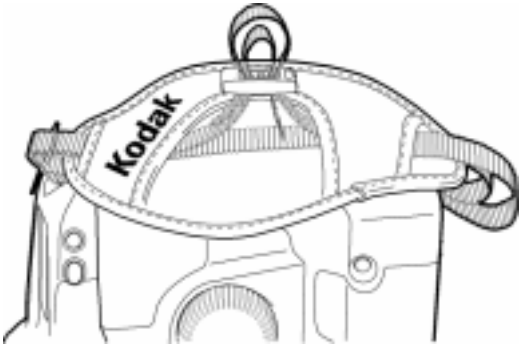


5 Thread both ends of the strap back through the loops on the hand strap pad.



6 Place the two-holed buckle on the top strap.

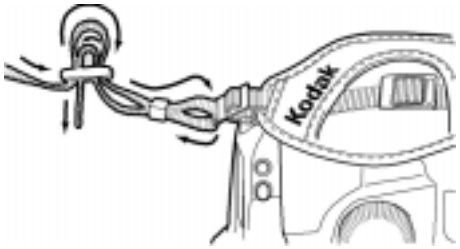
7 Tuck the top strap through the bottom loop in the hand strap pad.



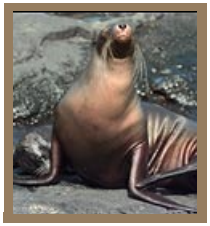
8 Thread the bottom strap through the two-holed buckle as shown.

9 Tuck the bottom strap through the top loop in the hand strap pad.

Attaching the Hand Strap and Neck Strap



1. Attach the Hand Strap (page 2-22).
2. Thread the neck strap through the three-holed buckle as shown.

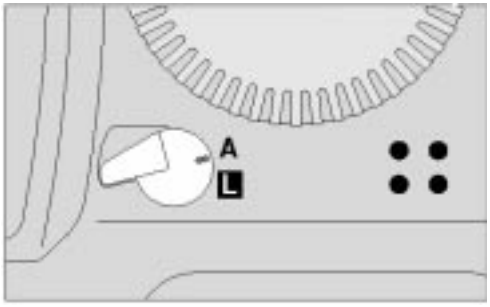


Powering Your Camera

You must operate your camera using either battery or AC power. An AC adapter is included with your camera (except with the base camera kit). Batteries are available through your camera dealer. Preserve battery power by using the AC adapter while working indoors or when your camera is connected to a computer.

Use a battery charger and an international power cord set with your camera. The power cords allow you to use the AC adapter and the battery charger in Australia, Britain, Germany, Japan, and the United States.

Turning the Camera On and Off



Set the Main switch to (**A**) to turn the camera on. (Set it to (L) to turn the camera off.

A = Active

L = Locked

Batteries

Your camera provides up to the following number of images per fully-charged battery:

Camera	NiMH battery	NiCd battery
DCS 520	1000	300
DCS 560	300	100

Extended camera metering, focusing, or Image Display operation reduces the number of images available from a charge.

☞ Battery performance deteriorates in temperatures below 32°F (0°C). Keep the camera and especially a spare battery close to your body or in an inside pocket to keep it warm until use.

WARNING: ⚠

All batteries can explode or cause burns if disassembled, shorted, exposed to high temperatures, or disposed of in fire. Be sure to observe all precautions indicated on the battery package. Always keep batteries out of the reach of children and follow the instructions on the battery label for recycling when you are finished with them.

CAUTION: ⚠

If you don't plan to use your camera for five or more days, you should remove the battery from the camera and carrier. This will prevent battery discharge, and/or damage due to battery leakage.

Inserting/Removing Batteries

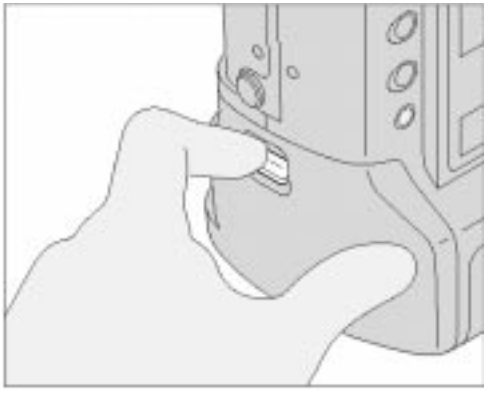
☛ You must charge a battery before using it for the first time.



1 If the camera is on, check the PC Card icon on the Back LCD panel.

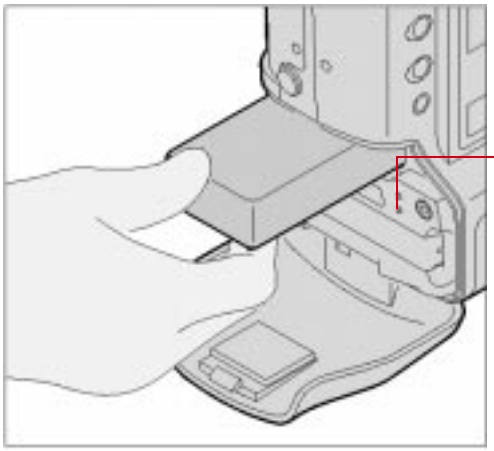
IMPORTANT:

If the icon is blinking, wait until it stops before continuing. (You can lose data if you remove the battery while the card is busy.)



2 Turn off the camera.

3 Place your index finger on the Battery/PC Card door switch and press downward while opening the door with your thumb and finger.



IMPORTANT:

Be sure that the red warning light is off before continuing.

4 To insert: slide the battery to the back of the battery slot and press firmly in place.

To remove: slide the battery out of the battery slot.

5 Close the Battery/PC Card door.

☞ You can insert or remove a battery while the camera is connected to the AC adapter.

IMPORTANT:

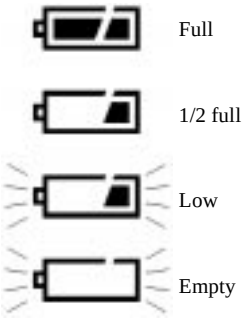
The battery can be inserted incorrectly, but it will not fully seat into the camera. Do not force the battery into the camera. Insert the end with the slots, pointed down, and press lightly to seat the battery contacts.

Checking Battery Status

You can determine whether a battery needs charging by viewing the Battery Status icon on your camera's Back LCD panel. (If the camera is using the AC adapter, the Battery icon is not displayed.)



1. Insert a battery in the camera (page 3-3).
2. Turn on the camera.
3. Check the Battery Status icon on the Back LCD panel.



The icon indicates whether the battery needs changing.

☞ The Battery Check function on the Top LCD panel does not function with this camera.

Always check the battery status at the following times:

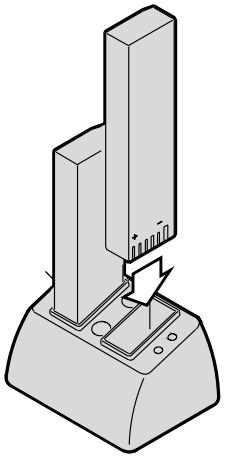
- ✔ When loading a new battery
- ✔ After lengthy storage
- ✔ If the shutter will not release
- ✔ In cold weather
- ✔ Before an important shooting assignment

Battery Charger

You will need to charge a battery before using it for the first time, then whenever it is low. If you plan to use your camera without the AC adapter for an extended period of time, it is a good idea to charge one or more batteries before you begin. An external battery charger is included with your camera (except with the base camera kit).

For the best results, store and use the battery charger within the following temperature ranges:

Storage temperature range: -25°C to 70°C (-77°F to 158°F)
Charging temperature range: 0°C to 45°C (32°F to 113°F)



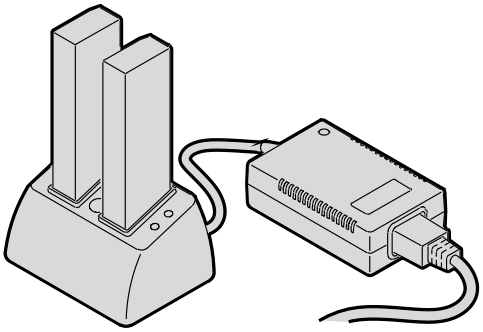
The battery charger has two slots. Lights near the slots illuminate to indicate the status of the batteries as follows:

Yellow light	Green light	Battery Status
Off	Off	No battery inserted
On	Off	Charging
Off	On *	Fully charged
Slow Flashing	Off	Conditioning (Discharging)
Fast Flashing	Off	Error

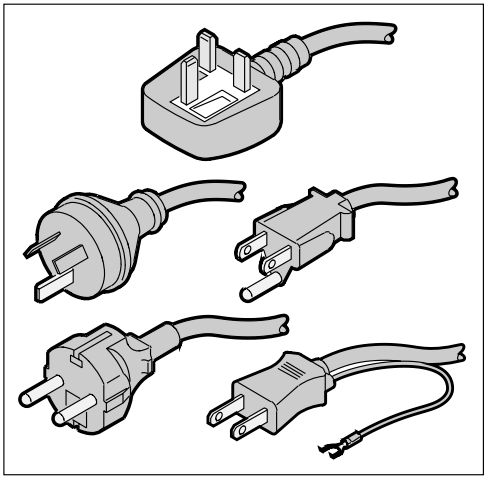
* Although you can use a battery when the light turns green, you will have optimal results if you leave the battery in the charger for 2 hours after the light turns green.

☞ Batteries can be recharged approximately 500 times.

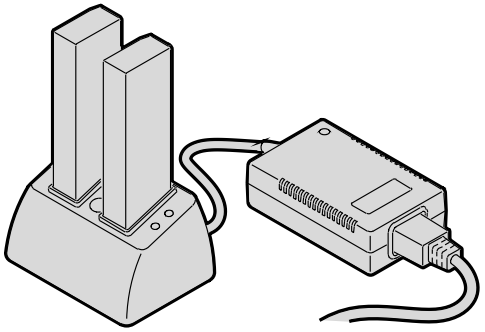
To Charge Batteries



1. Remove the battery from the camera (page 3-3).
2. Plug the cable from the AC adapter for charger into the battery charger jack.



3. Select the international power cord that is appropriate for your area.
4. Plug the power cord into a wall outlet.



5 Insert one or two batteries into the battery charger slots.

On average, the charger will completely charge a battery in approximately one hour. If two batteries are inserted, they are charged sequentially.

6 Once the green light turns on, wait two hours then remove the battery or batteries from the charger.

If you don't wait two hours, batteries will only be charged to 80% of capacity.

7 Insert a charged battery into the camera.

8 Close the camera door.



The Battery icon appears on the Back LCD panel when there is a battery in the camera, the camera is on, and the camera has not entered PowerSave mode. Refer to "PowerSave Mode" on page 3-10.

The Battery icon is not displayed if the AC adapter is connected.

If your battery charger does not function as expected, check the following:

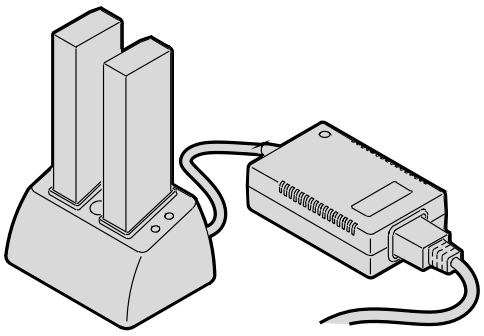
- ✔ Be sure the wall adapter is properly connected.
- ✔ Be sure there are no foreign objects lodged in the pockets.
- ✔ Be sure the batteries are inserted so that they properly mate with the connector in the bottom of the pocket.

☞ No harm will come to your batteries if you leave them in the charger for an extended period of time.

Conditioning

From time to time you may need to condition (discharge) a battery. You would only do so if a battery provides a noticeably shorter run time (less than 50% of normal capacity).

> IMPORTANT:
>
> *Don't condition your batteries too often or they will wear out prematurely.*



1. Insert one or two batteries in the battery charger slots.
2. Press the Condition buttons associated with the batteries that you wish to condition.

   The battery will first be conditioned, then charged. The whole process can take up to 5 1/2 hours.
3. Remove the batteries from the battery charger when the lights turn green.

☛ You can condition a battery in one slot while charging a battery in the other.

Battery Conservation

PowerSave Mode

PowerSave mode minimizes drain on your battery.If your camera is running on a battery, and you don’t touch it for 30 minutes, it will enter PowerSave mode (go to sleep).

Waking your Camera from PowerSave Mode



Six Second Timeout

When you release the Shutter button after pressing it halfway, the Top LCD panel, Back LCD panel, and viewfinder displays remain illuminated for six seconds.

Situations Using Extra Battery Power

- ✔ Use of a telephoto or wide angle fisheye lens and constant auto-focusing
- ✔ Frequent use of the Image LCD panel
- ✔ Cold temperatures
- ✔ Turning the camera on and off frequently

Image Display Timeout

The Image Display can drain your battery considerably. To minimize the drain, the Image Display turns off if you have not performed any camera activities for 60 seconds.

☛ The Image Display does not turn off if the AC adapter is connected.

To Restore the Image Display

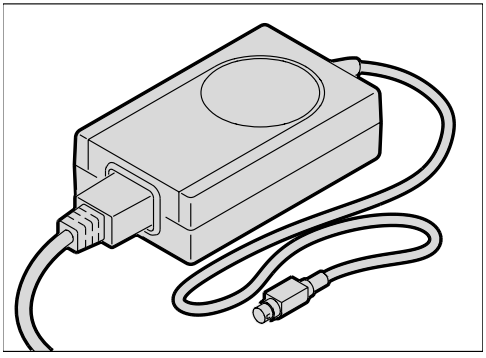


Press the DISP/MENU button.

AC Adapter

An AC adapter is provided with your camera (except with the base camera kit). Use the AC adapter when working indoors to lessen drain on the battery. You will also want to use it when connected to a computer to prevent loss of power if the battery should lose its charge.

The AC adapter does not have an On/Off switch. To turn off the AC adapter, unplug it



CAUTION: ⚠

Operate the equipment only from the type of power source indicated on the AC adapter. A line voltage outside of this range can destroy the AC adapter and/or the camera.

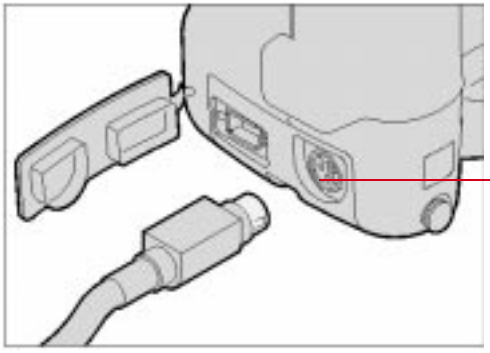
IMPORTANT:

Use only the AC adapter included with your camera or available from Kodak as an accessory. Do not plug other chargers or adapters into the camera.

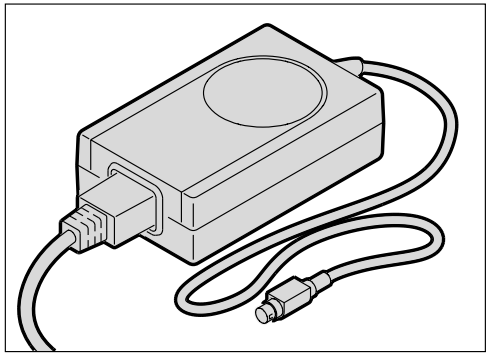
Do not use the AC adapter for any purpose other than for the camera.

The AC adapter is for indoor use only.

Connecting the AC Adapter



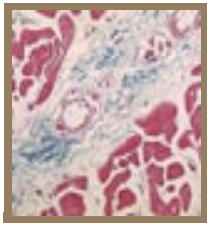
1. Open the small door on the side of the camera.
2. Plug the AC adapter into the AC Adapter connection.



3. Select the universal power cord that is appropriate for your area.
4. Plug the appropriate end of the power cord into the AC adapter.
5. Plug the power cord into a wall outlet.

☛ You can connect or disconnect the AC adapter while a battery is in the camera.

☛ The AC adapter will NOT charge a battery in the camera.



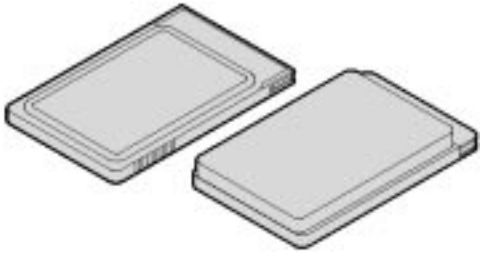
Using PC Cards

As you capture images, they are stored on a PC Card (PCMCIA card) in your camera. Before capturing images, you may want to prepare your camera so that the images are stored according to your needs. This chapter describes the use of the PC Card and provides instructions for storing images.

PC Cards

Your camera is designed to accept Type II or Type III PC Cards, which are compatible with the PCMCIA-ATA interface standard. Most hard disk drive and flash memory cards may be used. Hard disk drive cards will hold more images and are usually faster than flash memory cards, but flash memory cards are more rugged.

☛ PC Cards must be ATA-compatible.

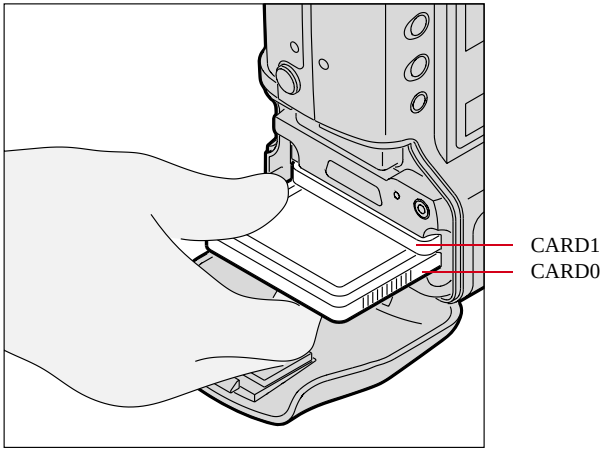


IMPORTANT:

Use extreme care when handling PC Cards, as they are easily damaged. If dropped, the PC Card may be destroyed, resulting in the loss of all data on the card.

Dual Slots for PC Cards

Your camera has two PC Card slots. With Type II PC Cards, you can use one or both slots. With Type III PC Cards, only one slot can be used. The card in the bottom slot is referred to as CARD0, and the card in the top slot is referred to as CARD1.



If using only one card, insert it in either slot. With two cards, the first card inserted is the active card. When you capture or delete images, they are saved to or deleted from the active card.

IMPORTANT:

Your camera uses 3 volt or 5 volt PC Cards. When you use two cards, they must both have the same voltage. If you insert two cards with different voltages, neither is powered. A "Card Voltage Mix" message will appear. You would need to remove one of the cards so that the other can be powered.

Inserting/Removing PC Cards

It is not necessary to turn off the camera before inserting or removing a card.

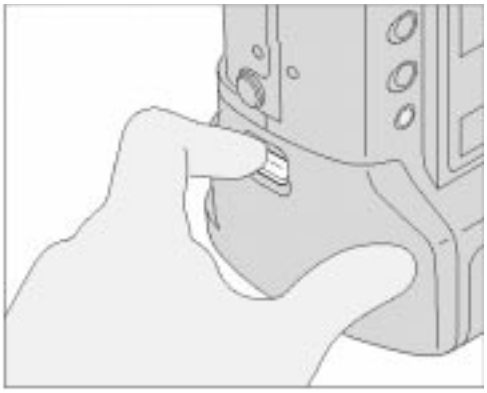
To Insert or Remove a PC Card



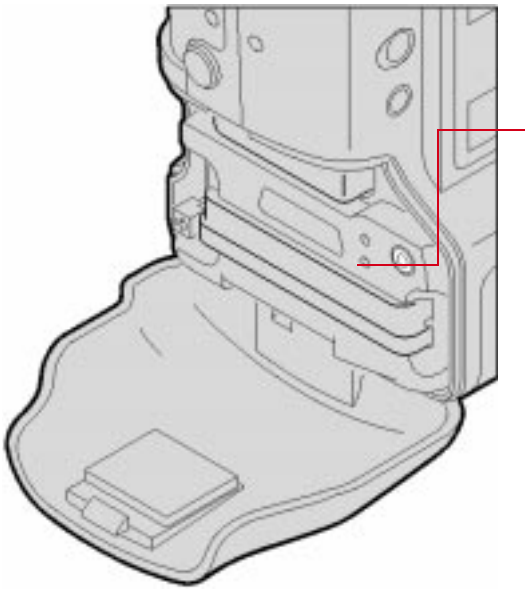
1 Check the Card icon on the Back LCD panel. It blinks when a card is busy.

IMPORTANT:

Do not remove a card while the icon or the Card Busy light are blinking. (You can lose data if you remove the PC Card while it is busy.)

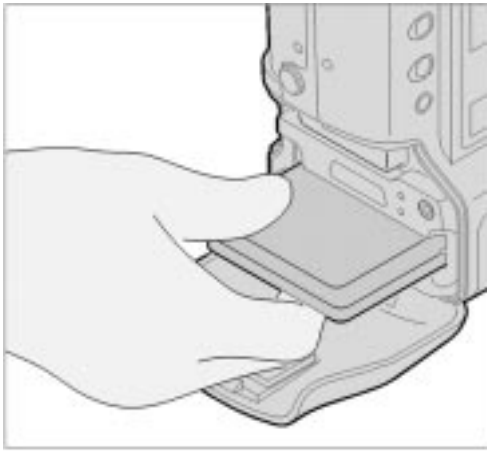


2 Place your index finger on the door latch and press downward while opening the Battery/PC Card door with your thumb and finger.



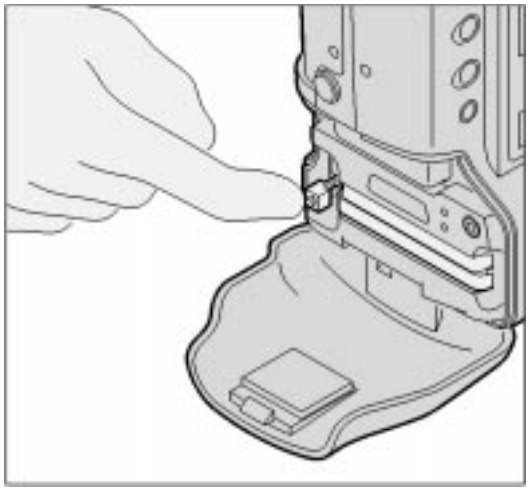
IMPORTANT:

Before continuing, be sure that the red warning light is not blinking.



3 To insert: slide the PC Card all of the way into the lower slot and press firmly.

☛ A label inside the door indicates the proper position for the card.



To remove: press the Eject button and pull the PC Card out.

4 Close the Battery/PC Card door.



The Card icon is displayed on the Back LCD panel when there is a card in the camera.

Formatting a PC Card

As a precaution against formatting the wrong card, there can only be one card in the camera when you format. Format the card using either the quick format or the full format feature.

IMPORTANT:

Quick format, while faster, is not recommended if there is a possibility that there are defects on the PC Card media.

The Recover function only works if a PC Card has been formatted on the camera.

1. Select the Menu icon, then choose Main Menu from the dropdown menu. Refer to “Navigation Techniques” on page 2-11.
2. Select Card from the Main menu.

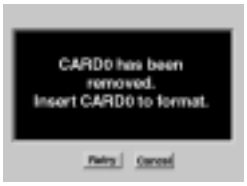
   The Card menu appears.



3. Choose Quick Format or Full Format.



If two cards are in the camera, you are prompted to remove the inactive card. For example, if CARD0 is active, you are prompted to remove CARD1.







4 Remove the inactive card, then select Retry.

If you remove the active card, the message at the left appears.

5 Re-insert the card in the proper slot, then select Retry.

A confirmation screen appears.

6 Select Yes or No.

If you choose No, the Main menu appears and the card is not formatted.

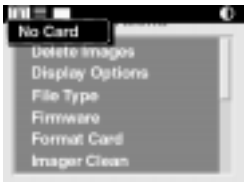
If you choose Yes, the card is formatted. A Progress screen appears.

If you wait for the progress bar to go to completion, a full format occurs. If you press the Cancel button, a quick format occurs. With a quick format, the card will be usable, but occasional errors may occur when you save images.

Selecting a PC Card or Folder

Images are stored on the PC Card in folders. There is always at least one empty folder on the card. When you store an image in an empty folder, a new empty folder is automatically created. The new folder is called FolderX, with X being the next number available.

Selecting a PC Card or Folder

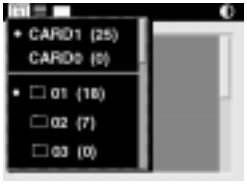


1 Select the Folder icon (page 2-11).

If there is no PC card in the camera, an X appears within the Folder icon. Selecting the icon produces this screen.



With one PC Card, this dropdown menu appears with a • displayed next to the currently active folder.



With two PC Cards, this dropdown menu appears with a • displayed next to the currently active card and the currently active folder on that card.

A 0 or 1 appears in the Folder icon, indicating the active PC Card.

The listed folders are on the active card. The folder list changes when you change cards.

2 With two PC Cards, select CARD0 or CARD1 from the dropdown menu (page 2-11), then select a folder. With one card, select a folder.



Saving Files

JPEG and TIFF File Processing

The DCS 520 camera supports background image processing that produces JPEG or TIFF RGB files that can be opened directly by any image editing software. This feature is not currently available on the DCS 560 camera.

The choices for processed files are JPEG Good, Better, Best, and TIFF RGB. JPEG Good files have the most compression, JPEG Best have the least. The less compression, the better the quality of the processed file and the larger the file size. The file size varies, depending on content. TIFF RGB files are not compressed.

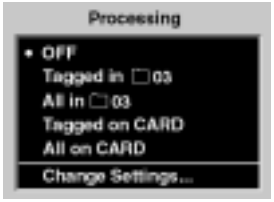
When you capture images, they are written to the selected folder using the TIFF Custom format, regardless of whether processing is turned on. If you turn on processing, JPEG Best, Better, Good, or TIFF RGB files are created and saved when the camera is not busy with other tasks such as capturing images.

JPEG files are saved to a JPEG folder and TIFF RGB files are saved to a TIFF folder. These folders are created on the PC Card when you turn on processing (if they don't already exist). If you select the JPEG or TIFF folder to review images, then you capture an image, a message informs you that images cannot be saved there. You can specify whether the original TIFF file is saved or deleted once the JPEG or TIFF RGB file is saved.

The default for processing is Off. When you turn on processing, it stays on until you turn it off, or remove the PC Card.

Processing with Two PC Cards

When you have PC Cards in both slots, images are processed on the card that is active when you turn on processing. If you make the other card active, processing continues on the inactive card. For example, if CARD0 is active when you turn on processing, then you change to CARD1, processing continues on CARD0, but not on CARD1. In this case, if you want to switch processing to CARD1, you must turn off processing, then turn it back on. When turned on, processing is automatically set for the active card (CARD1).

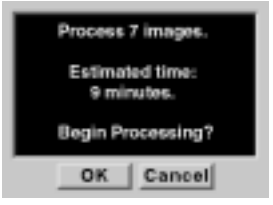


1. Select the Menu icon, then choose Main Menu from the dropdown menu. Refer to “Navigation Techniques” on page 2-11.
2. Select Processing from the Main menu.

   The Processing menu appears. If two PC Cards are inserted, the active card is indicated, for example, All on CARD1.
3. Select your choice.

Choice	Images Processed
OFF	Turns off processing
Tagged in folder	All tagged images in the selected folder on the active card
All in Folder	All images in the selected folder on the active card
Tagged Images	All tagged images on the active card
All on Card	All images on the active card
Change Settings	Displays a screen where you can change processing settings (page 5-5)

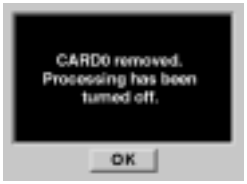
The Processing confirmation screen appears.



4. Select OK to begin processing or Cancel to return to the Main menu without processing.

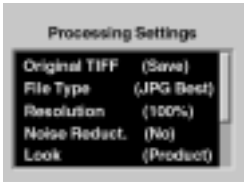
When you enable Processing, certain conditions may exist which will cause other screens to appear, as shown in the table below.

Condition	Screen	Your Action
There is no PC Card in the camera.		Click OK and insert a PC Card.
Processing is enabled for the selected folder and there are no images in the folder. Similar screens appear when the same condition exists for tagged images or for all images on the card.		If you click OK, new images are processed when you capture them to that folder. If processing is enabled for tagged images or all images on the card, then images are processed as you tag or capture them. If you click Cancel, processing is not started.
Processing is enabled for the selected folder and all images in the folder have been processed. Similar screens appear when the same condition exists for tagged images or for all images on the card.		
There are two PC Cards in the camera. With processing enabled for one card, you make the other card active, then access the Processing menu.		If you click OK, Processing continues on the inactive card. If you click Cancel, processing stops on the inactive card. You can then enable processing on the active card, if desired, if desired.

Condition	Screen	Your Action
Your processing settings are set to delete the original TIFF image when you process files. Refer to “Changing Processing Settings” on page 5-5.		If you click OK, a second confirmation screen appears. If you click Cancel, Processing is not started. The Processing menu appears.
The active PC Card becomes full as images are being processed. This can occur regardless of whether there are one or two cards in the camera.		Click OK and delete some images or insert a different card.
You remove a PC Card while processing is enabled (whether or not images are currently being processed).		

Changing Processing Settings

There are several processing settings that you can change. The settings are applied to images as they are processed.

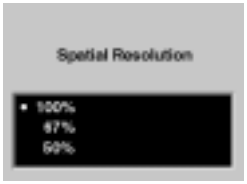


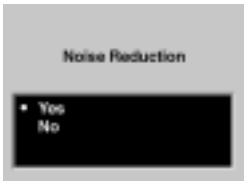
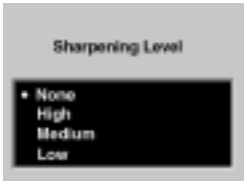
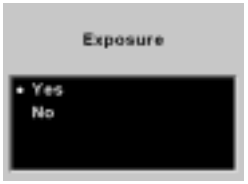
1. Select Change Settings from the Processing menu.

   The Processing Settings menu appears with the current values shown in parentheses.

2. Select the desired setting.

   The following screens appear, depending on your choice:

Processing Settings	Screen	Defaults Underlined	Result
Original TIFF		Save	Saves the TIFF image (default).
		Delete	Deletes the TIFF image after the processed JPEG file has been saved.
File Type		JPEG Best, Better, Good, TIFF RGB	Files are processed to the selected JPEG quality.
Resolution		100%	Maintains the size and spatial resolution of the original image.
		67%	The size and spatial resolution are reduced to two-thirds.
		50%	The size and spatial resolution are reduced to one-half.

Processing Settings	Screen	Defaults Underlined	Result
Noise Reduction		Yes	Noise is reduced in processed images.
		No	Noise is not reduced.
Look		Portrait	Applies a lower contrast tone scale with more detail in the highlights and shadows.
		Product	Applies a higher contrast, more vibrant tone scale.
Sharpening Level *		None	No sharpening is applied to the finished image.
		High	Progressively less sharpening is applied to the finished image.
		Medium	
		Low	
Exposure		Yes	Automatic exposure compensation is applied
		No	Automatic exposure compensation is not applied

* The Sharpening Level setting in the Processing menu determines whether sharpening is applied when images are processed on the camera. The Sharpening property in the Properties menu determines whether sharpening is applied by the DCS Host software.

Working with TIFF Custom Files on your Computer

If you don't process images on your camera, you need to use one of the following software applications to work with the TIFF Custom files. (The TIFF Custom file format is proprietary to Kodak.)

File Format Module

- ✔ This software application allows you to open high resolution TIFF Custom images directly into Photoshop.

DCS Acquire Module or DCS TWAIN Data Source

- ✔ These are full-featured image editing and acquire software applications.

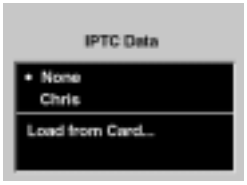
If the DCS Host Software CD (included with your camera) includes the DCS Acquire Module and DCS TWAIN Data Source version 5.8 or later, you will be given the option of installing the DCS File Format Module. If the CD includes a version prior to 5.8, the DCS File Format Module is not included. To download the DCS File Format Module, visit the Kodak Web site (www.Kodak.com).

- ☞ If you attempt to open TIFF Custom files in Photoshop without using the DCS File Format Module, the DCS Acquire Module, or DCS TWAIN Data Source, only the thumbnail version will be available, yielding a less than optimal image resolution.

IPTC Data Management

This feature allows inclusion of International Press Telecommunication Council (IPTC) data as part of the image header. You enter the IPTC data on your computer using the DCS Acquire Module or DCS TWAIN Data Source (version 5.8 or later) and save it to a PC Card. (Refer to the KODAK PROFESSIONAL DCS Host Software User's Manual.)

Once IPTC data has been saved to a PC Card, you can load the data into your camera (page 5-9).



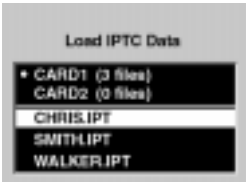
1. Select the Menu icon, then choose IPTC Data from the dropdown menu. Refer to "Navigation Techniques" on page 2-11.
2. Select your choice from the IPTC Data menu:

   None—No IPTC data is written to the image headers.

   IPTC Data File—If there is an IPTC file on the camera, it is displayed. Choosing this option writes the IPTC data to the image header.

   Load from Card—You can load an IPTC file from a PC Card. Refer to "Loading IPTC Data from a PC Card" on page 5-9.

Loading IPTC Data from a PC Card



1. With the IPTC Data screen displayed (page 5-8), choose Load from Card.

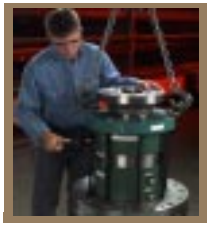
   The Load IPTC Data screen appears with a list of the IPTC files on the active PC Card. (If only one card is in the camera, the card choices do not appear.)

2. Press and hold the SELECT button and rotate the Quick Control dial to choose the desired card. (You may need to scroll up to the card choices if there are numerous IPTC files.)

3. Repeat step 2 to choose an IPTC file.

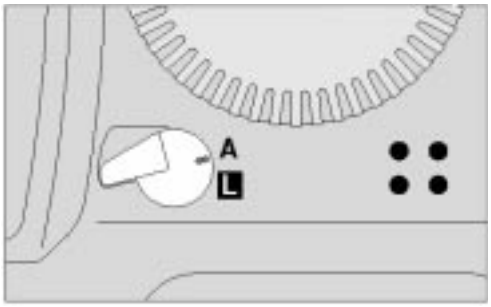
   The file is loaded from the PC Card to your camera.

   Each file must have a unique name. If you attempt to load a file with the same name as one on your camera, a message asks if you want to replace the existing file.



Configuring Your Camera

This section describes how to change various camera settings such as the ISO and Drive modes, allowing you to precisely configure the camera for specific shooting situations.



Set the camera's Main switch to (**A**).

Date and Time

You can set the date and time to be associated with each image captured. The format for the date is year/month/day and the format for time is hour:minute:second based on a twenty-four-hour clock. The setting is maintained when you turn off the camera, after Powersave, or when you remove the battery for a few days.

☞ There is a small rechargeable battery in the camera than can lose its charge if you remove the main battery for a long period of time. In this case, you would need to reset the date and time after replacing the main battery.

1 Select the Menu icon, then choose Main Menu from the dropdown menu. Refer to "Navigation Techniques" on page 2-11.



2 Select Date/Time from the Main menu.

The Date/Time screen appears. There are six fields: year, month, day, and hour, minutes, seconds.

3 Press and hold the SELECT button and rotate the Quick Control dial to change the highlighted field.

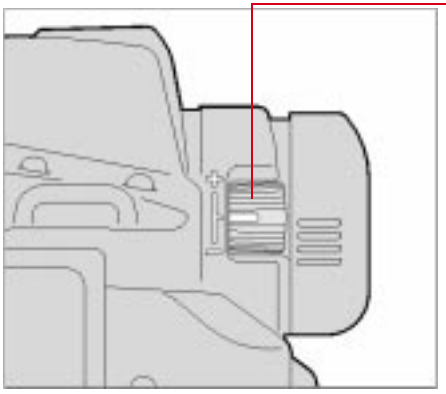
4 Release the SELECT button to accept the change and highlight the next field.

To leave a field unchanged, press and release the SELECT button without using the dial.

☛ When the seconds field is highlighted and you press the SELECT button, the seconds stop counting.

Dioptric Adjustment of the Viewfinder

The viewfinder has a built-in dioptric adjustment mechanism that lets you adjust the eyesight correction to achieve a sharp viewfinder image. This allows near-sighted or far-sighted users to capture images without wearing glasses. The diopter can be adjusted within a range of –3 to +1 dpt.



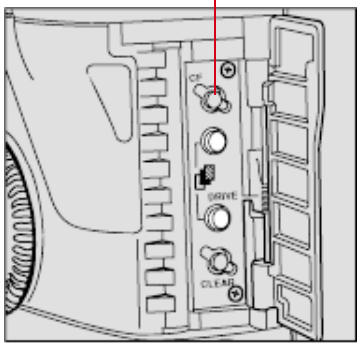
Look into the viewfinder and turn the Dioptric Adjustment dial in either direction until the five focusing points or the fine spot metering area mark appear sharp.

☛ The adjustment range is from –3 dpt to +1 dpt (diopter). For adjustment exceeding this range, use one of the Dioptric Adjustment Lenses available from Canon.

Custom Functions

A set of custom functions is provided to let you tailor the camera's functions according to your personal preferences and shooting style. Full descriptions of each custom function are provided later in this chapter. Twelve custom functions are available, and each of them has at least two settings. Some have more than two settings. The default setting for each custom function is 0 (for example, F-9-0). All other settings are optional, (for example, F-9-1, F-9-2, or F-9-3). Select one setting per custom function.

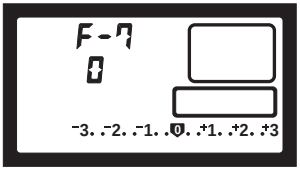
Selecting and Setting Custom Functions

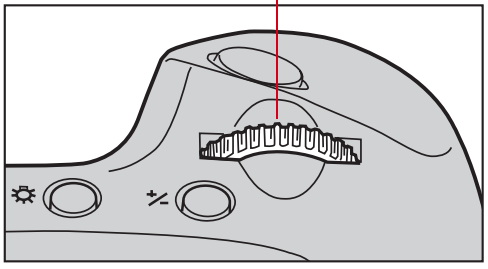


1 Set the Main switch to (**A**).

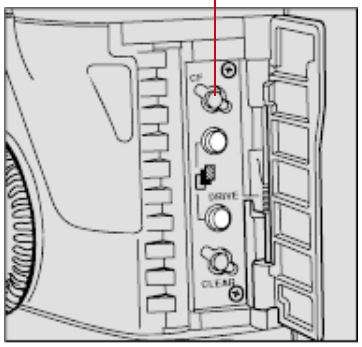
2 Open the palm door and press the Custom Function (CF) button.

A custom function number is displayed in the Top LCD panel.





3 Turn the Main dial clockwise or counter-clockwise until the desired custom function number is displayed in the Top LCD panel.



-3. -2. -1. 0. +1. +2. +3

✔ Display example indicating that custom functions 5, 10, and 14 are set.

4 While the custom function number is displayed, press the CF button to change the setting. The number changes each time the Custom Function button is pressed.



Dots are displayed below the exposure scale to indicate optional custom function settings that have been selected.

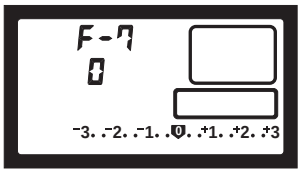
☛ A dot below "–2" indicates that an optional setting for custom function F-4 has been selected. Dots for other custom functions appear to the right or left of the "–2" position.

☛ You can check the custom function settings at any time by pressing the CF button to activate the Top LCD panel.

5 Press the Shutter button halfway to complete the setting and restore the Top LCD panel to the original display.

Resetting Individual Custom Functions

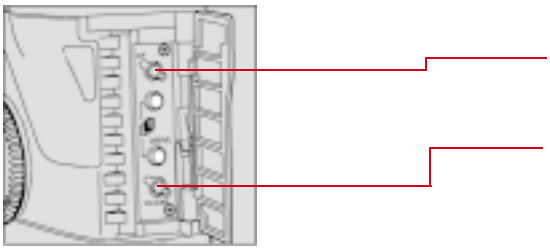




1. To reset a custom function to the standard (default) setting, select the custom function and then press the CF button to change the number in the Top LCD panel to “0”.
2. Press the Shutter button halfway to complete the setting and restore the Top LCD panel to the original display.

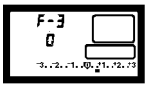
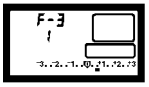
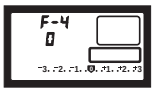
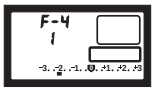
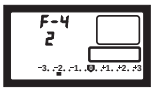
Resetting All Custom Functions At Once

You can reset all custom functions to their default (0).

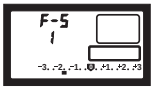
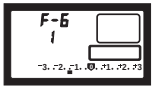
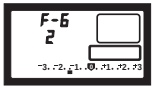


1. Set the Main switch to (**A)**.
2. Open the palm door and press the CF button.
3. Press the Clear button

Custom Function Chart

Type	Custom Function No.	Affected Function	Top LCD Panel Display	Setting No.
Beeping on/off	F-3	Beeping when in focus		0
				1
Focus	F-4	AF Operation method		0
				1
	F-4	AF Activation		2

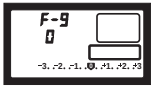
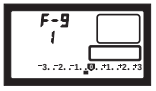
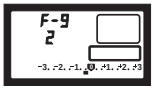
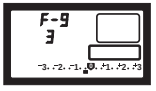
Operation	Useful Situations
No beeping when subject is in focus. Beeps when the subject is in focus.	Set to suit your shooting style and the environment.
Autofocus starts when the Shutter button is pressed. Exposure is locked when AE Lock button (T) is pressed. Autofocus starts when the AE Lock button (T) is pressed. Exposure is locked when the shutter button is pressed halfway.	1: This option lets you carry out metering and autofocusing independently.
Autofocus starts when the Shutter button is pressed halfway. Focus is locked when the AE Lock button (T) is pressed.	2: For sports photography using focus prediction in AI Servo AF mode, this option lets you temporarily stop the focus.

Type	Custom Function No.	Affected Function	Top LCD Panel Display	Setting No.
Exposure	F-5	Shutter speed and aperture value setting method in Manual Exposure mode		0
				1
	F-6	EV steps for the shutter speed, aperture, exposure compensation, flash exposure compensation, and AEB		0
				1
				2

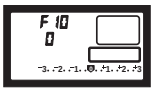
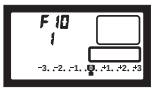
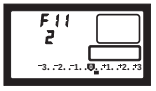
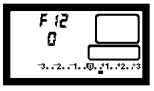
Operation	Useful Situations
Shutter speed is set by the Main dial. Aperture value is set by Quick Control dial or by combined operation of the Exposure Compensation button (+/-) and Main dial. Aperture value is set by the Main dial. Shutter speed is set by the Quick Control dial or by combined operation of the Exposure Compensation button (+/-) and the Main dial. • For operation when combined with custom function F-11, refer to “Combined Use of custom functions F-5 and F-11” later in this chapter.	When making manual exposure adjustments, this function lets you choose whether to use the Main dial for adjusting the shutter speed or aperture value. This option is convenient for studio flash photography where the shutter speed is kept constant while the aperture is frequently varied to alter the depth of field and exposure.
Shutter speed, aperture value, exposure compensation, flash exposure compensation and AEB step amounts are set in 1/3-stop increments. Shutter speed and aperture value are set in 1-stop increments, and exposure compensation and AEB step amounts are set in 1/3 stop increments. Shutter speed, aperture value, exposure compensation, flash exposure compensation, and AEB step amounts are set in 1/2-stop increments.	This function lets you input shutter speed and aperture settings in the desired increment. 1/2-stop exposure compensation settings are also possible, providing wide flexibility to satisfy various shooting styles.

Type	Custom Function No.	Affected Function	Top LCD Panel Display	Setting No.
Focus	F-7	Manual focusing with the electronic manual focusing ring		0
				1

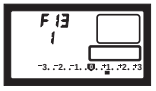
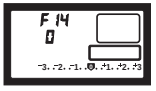
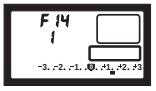
Operation	Useful Situations
Manual focusing is possible. • This function works only with lenses equipped with an electronic manual focusing ring. Manual focusing is prohibited. • Manual focusing by setting the Lens' Focus Mode switch to "**M**" is possible.	This option disables the manual focusing capability of the electronic ring provided on many USM lenses, eliminating the possibility of accidentally turning the ring and shifting the focus after autofocusing is complete. Compatible Lenses: EF50/1.0L USM EF 85/1.2L USM EF 200/1.8L USM EF 300/2.8L USM EF 400/2.8L USM EF 500/4.5L USM EF 600/4L USM EF 1200/5.6L USM EF 28-80/2.8-4L USM

Type	Custom Function No.	Affected Function	Top LCD Panel Display	Setting No.
Exposure	F-8	Center-weighted average metering		0
				1
	F-9	AEB (Auto Exposure Bracketing) exposure sequence		0
				1
				2
				3

Operation	Useful Situations
Evaluative metering Center-weighted average metering. • The Top LCD panel still shows the evaluative metering indication.	Setting this function to center-weighted average metering provides you with a predictable metering pattern for determining exposure. This is useful for experienced photographers who have developed an ability to accurately determine exposure combining average metering and exposure compensation.
Under->Correct->Over Under->Correct->Over Correct->Under->Over Correct->Under->Over • 0 & 2: AEB operation is canceled when the Main switch is set to (L), the Lens is exchanged, bulb exposure mode is set, flash charge completion is detected, or the Clear button is pressed. • 1 & 3 AEB operation is not canceled when the Main switch is set to(L) , the Lens is exchanged. AEB mode can be selected by simultaneously holding down the AF Mode and Shooting Mode selectors and turning the Main dial	2, 3: These settings change the bracketing sequence to “0 -> - -> +”, which is useful when shooting live subjects or changing scenes where the first shot will most likely capture the best expression of composition. 1, 3: These settings are useful if you frequently use AEB, as it prevents AEB mode from being canceled every time you change the lens and set the Main switch to (L). It lets you activate AEB mode using an external setting operation, eliminating the need to open the camera’s palm door.

Type	Custom Function No.	Affected Function	Top LCD Panel Display	Setting No.
Focus	F-10	Elimination of AF frame display		0
				1
	F-11	Focusing point selection		0
				1
				2
Mirror operation	F-12	Mirror up operation		0
				1

Operation	Useful Situations
Focusing point superimposed (red) Superimpose is prohibited	You might use this option if you are annoyed by the AF frame illumination in the viewfinder, or if you frequently use manual focusing to adjust the final focus.
Focusing Point selector (·····) and Main dial Exposure Compensation button (+/-) + Main dial	0,1: This option makes it possible to match your camera's button operations to existing EOS-1 or EOS 5-A2/A2E cameras.
Independent operation of Quick Control dial or Exposure Compensation button (+/-) + Main dial • Focusing point selection using the Quick Control dial is possible during metering operation when the 6-second metering timer is activated, or during continuous shooting in AI Servo AF mode. • After the far left or far right focusing point is selected, selection cannot proceed in the same direction.	2: This option lets you track the subject with the focusing point in real-time by operating the Quick Control dial. This can be useful when you are tracking a moving subject using the Focus Prediction control in AI Servo AF mode.
Normal operation Mirror up operation	This is effective for preventing camera shake caused by mirror operation shock when making long exposures. Use of a tripod is recommended.

Type	Custom Function No.	Affected Function	Top LCD Panel Display	Setting No.
Exposure	F-13	Spot metering at the AF frame		0
				1
Flash	F-14	Fill-in flash control		0
				1

Operation	Useful Situations
Fine spot metering in center of image area. Spot metering linked to the manually selected focusing point. • In automatic focusing point selection mode, spot metering is carried out for the center focusing point only.	This function links spot metering to the focusing point, allowing you to spot meter the subject without changing the framing of the scene.
Automatic flash output reduction control active. Automatic flash output reduction control prohibited.	This function prevents underexposure of strongly backlit subjects, for example, when you are shooting portraits backed by light from the late afternoon sun.

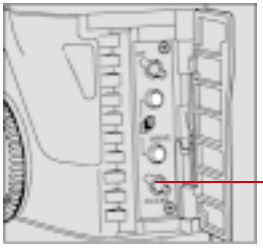
Combined Use of Custom Functions F-5 and F-11

When custom functions F-5 and F-11 are combined, shutter speed and aperture value settings are carried out as shown in the following table.

Custom Function No.		**F-5**	
	Selection No.	0	1
F-11	0	Shutter speed: Set by Main dial Aperture value: 1) Set by Quick Control dial or 2) Set by Exposure Compensation button (±) and Main dial.	Aperture value: Set by Main dial Shutter speed: 1) Set by Quick Control dial or 2) Set by Exposure Compensation button(±) and Main dial
	1	Shutter speed: Set by Main dial Aperture value: 1) Set by Quick Control dial or 2) Set by Focusing Point selector(·····) and Main dial.	Aperture value: Set by Main dial Shutter speed: 1) Set by Quick Control dial or 2) Set by Focusing Point selector(·····) and Main dial
	2	Shutter speed: Set by Main dial Aperture value: 1) Set by Quick Control dial or 2) Set by Focusing Point selector (·····) and Main dial.	Aperture value: Set by Main dial Shutter speed: Set by Focusing Point selector (·····) and Main dial

Resetting the Camera to Its Initial Settings

Resetting All Camera Functions



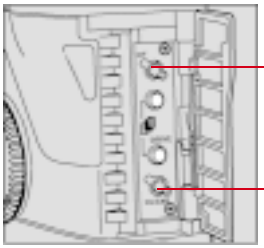
Reset all of the camera's functions (except for the custom functions) to their default settings by opening the palm door and pressing the Clear button. After resetting, the camera's functions are set as shown below:

Function	Setting
Shooting mode	Program AE (P) mode
AF mode	One-shot AF
Metering mode	Evaluative metering
Drive mode	Single exposure (▭)
Custom functions	Not affected

Caution:

- ✔ When custom function F-8 is set for center-weighted average metering instead of evaluative metering, and the metering mode is set to partial metering or spot metering, pressing the Clear button will reset all of the camera functions except for the Metering mode, which remains at the current setting.

Resetting All Custom Functions



Reset all of the custom functions to their initial settings by pressing the Custom Function (CF) button before pressing the Clear button.

Camera Properties

You can set the following camera properties using camera controls: Display Off time, PowerSave time, Enable Sharpening, Dropdown Menu Lag Time, Use FOLDER01,and Resolution. You can also specify Custom Functions settings. The list of properties may change as new versions of firmware become available.

Setting Display Off Time

Extended use of the Back LCD panel can drain your battery.

To change the length of time before the Back LCD panel turns off:





1 Select the Menu icon, then choose Properties from the dropdown menu (page 2-11).

1 With the Properties menu displayed, select Display Off Time.

The Display Off Time screen appears.

This screen (and the Powersave screen) operate a little differently than the others.

2 Press and hold the DISP/MENU button.

A vertical arrow appears at the right of the screen.

3 While continuing to press the DISP/MENU button, rotate the Quick Control dial to change the highlighted number.

4 Release the DISP/MENU button

The vertical arrow goes away and the changed number is displayed on the screen.



5 To highlight a different number, press and hold the DISP/MENU button.

A horizontal arrow appears at the bottom of the screen.

6 While continuing to press the DISP/MENU button, rotate the Quick Control dial to highlight a different number.

7 Release the DISP/MENU button.

The horizontal arrow goes away and the new number is highlighted.

8 Repeat steps 2 through 7, as needed. (The DISP/MENU button toggles between the vertical arrow that changes the value of a number and the horizontal arrow that selects a different number.)

9 Select OK to establish the new setting, or Cancel to retain the original setting.

Enabling Sharpening

Some DCS 520 and 560 cameras are equipped with an antialiasing filter, an optical filter that is mounted inside the camera in front of the electronic imager. This filter eliminates unwanted color artifacts, and improves overall image quality at the expense of a small loss of sharpness. Depending on your subject, you may or may not want to allow sharpening when the image is processed. For example, you might want to sharpen an image of a piece of equipment, and might not want to sharpen a portrait or an image of clothing items.

☞ Some DCS 520 cameras (base camera kits) use IR filters instead of antialiasing filters.

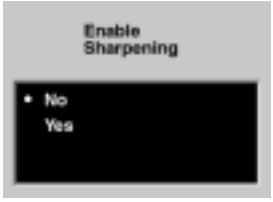
Sharpening can be applied in one of two places:

- ✔ In the DCS Host Software during image processing.
- ✔ On the camera when you process an image. Refer to “Processing Images” on page 5-2.

This section describes the camera’s Sharpening property which determines whether sharpening is applied by the DCS Host Software’s “At Capture” setting in the Sharpen Image preference. If you set the Sharpen Images preference to “On” (or “Off”), images are sharpened (or not), regardless of the camera property setting. Refer to the DCS Host Software User’s manual.

☞ The Sharpening property has no impact on whether sharpening is applied during processing in the camera.

The default Sharpening property setting is Yes for DCS 560 cameras and No for DCS 520 cameras. If you remove the antialiasing filter, set the Sharpening property to “Off”. Refer to “Removing, Cleaning, and Re-installing the Anti-aliasing Filter” on page 14-3.

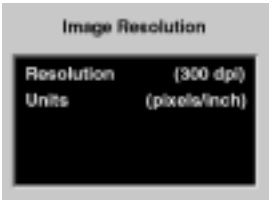


1. Select the Menu icon, then choose Properties from the dropdown menu. Refer to “Navigation Techniques” on page 2-11.
2. Select Sharpening from the Properties menu.

   The Sharpening screen appears.
3. Choose No or Yes.

Setting File Resolution

You can specify a file resolution to be saved in the header of subsequently captured images. This property does not affect image processing in the camera, the DCS Acquire Module, or the DCS TWAIN Data Source. The specified resolution is used by applications such as Photoshop when displaying the images.







1. Select the Menu icon, then choose Properties from the dropdown menu. Refer to “Navigation Techniques” on page 2-11.
2. Select Resolution from the Properties menu.

   The Image Resolution screen appears.
3. Select Resolution or Units.

   If you select Resolution, the Resolution screen appears.
4. Press and hold the SELECT button and rotate the Quick Control dial to change the highlighted field.
5. Release the SELECT button to accept the change and highlight the next field.

   To leave a field unchanged, press and release the SELECT button without using the dial.

   If you select Units, the Resolution Units screen appears.
6. Choose Pixels/inch or Pixels/cm.

Setting Powersave Time

You can change the PowerSave time using the same procedure described for changing Display Off time. Refer to “PowerSave Mode” on page 3-10.

Determining Total Actuations

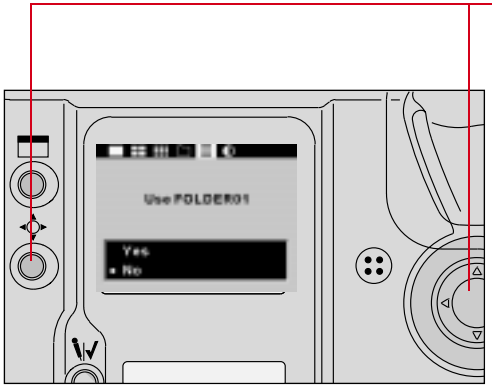
You can determine the number of images captured by your camera from the time of its manufacture.

With the Properties menu displayed, select Total Actuations.

The Total Actuations screen appears, informing you of the number of images captured.

Use Folder 1

You can specify whether the default place to store images is an empty folder or folder 1 when you insert a new PC Card.



1. With the Properties menu displayed, select Use FOLDER01.

   This Use Folder 1 screen appears.

2. Highlight Yes or No.

   If you select Yes, every time you replace your PC Card, images will be stored in folder 1.

   If you select No, every time you replace your PC Card, images will be stored in the first empty folder found on the PC Card.

Setting the Dropdown Menu Lag Time

The default delay between the time a Menu bar icon is highlighted and its dropdown menu appears is 750 milliseconds. You can change this time using the Properties menu.



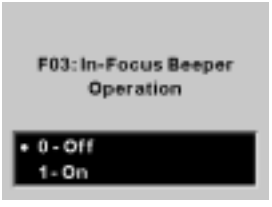
1. With the Properties menu displayed, choose Dropdown Menu Lag.

   The Dropdown Menu Lag screen appears.

2. Choose a number from 1 to 5. 1 gives the longest delay, and 5 gives the shortest. (A setting of 3 provides a 750 millisecond delay.)

Custom Functions

You can specify settings for Custom Functions 3 to 14. Custom Functions are described earlier in this Chapter.



1. With the Properties menu displayed, select the desired Custom Function.

   This appropriate Custom Function screen appears.

2. Press and hold the SELECT button and use the Quick Control dial to highlight the 0 - Off or 1 - On.

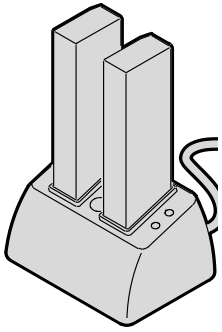


Quick Start

This chapter is intended as a quick reference. Much of the information in this chapter is covered in more detail in other chapters.

☛ The information in this chapter is also available in the Quick Start Guide.

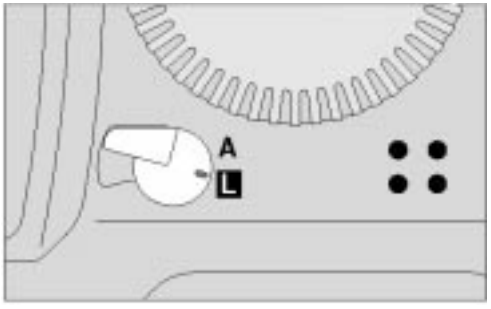
Before You Start



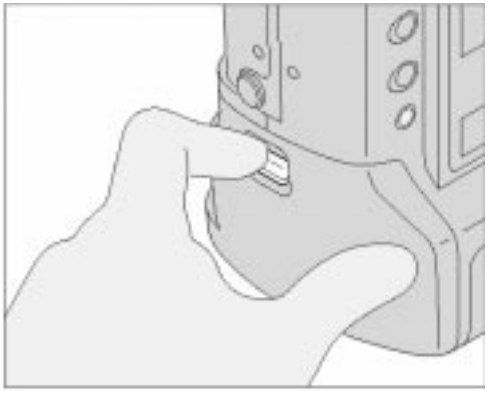
1 If you have not already done so, charge your battery using the external battery charger that was included with your camera. (This is not included in the base camera kit.)

You can insert either one or two batteries in the battery charger. The lights on the battery charger will turn green when the batteries are completely charged.

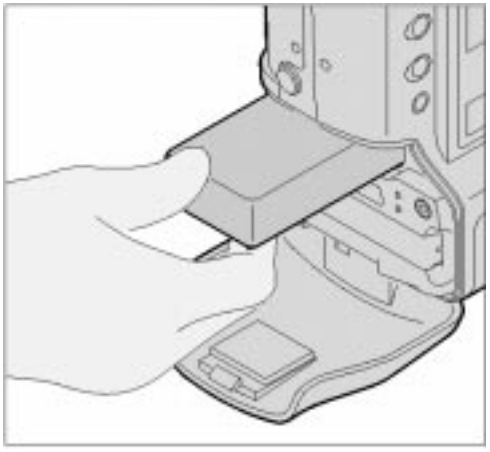
Refer to Chapter 3 for more information on batteries.



2 Turn off the camera by setting the Main switch to (L).

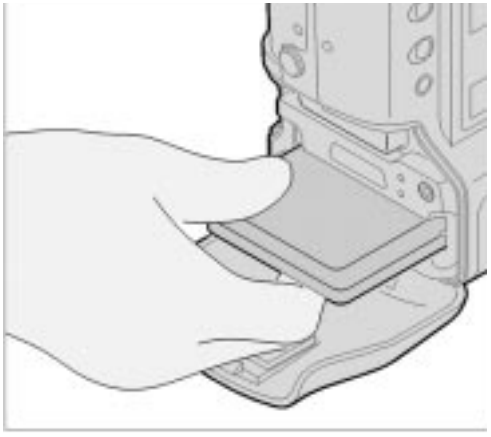


3 Open the Battery/PC Card door.

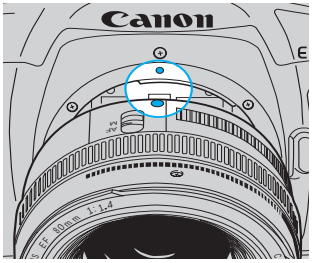


4 Insert the battery into the battery slot.

☞ When working indoors, conserve your battery and power your camera using the AC adapter that is provided with your camera.

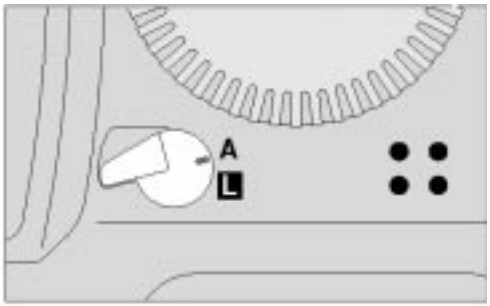


5 Insert a PC Card into the lower card slot.

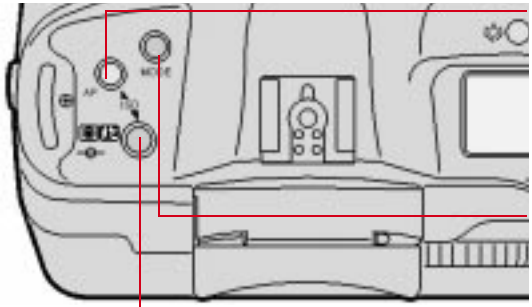


6 Close the Battery/PC Card door.

7 Attach your lens to the lens mount by aligning the red dots on the lens and camera body, and rotating the lens clockwise until it locks in place with a click.



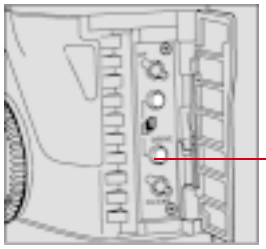
8 Turn on the camera by setting the Main switch to (**A**).



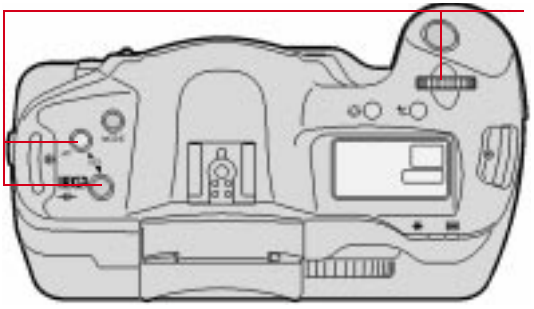
9 Select an autofocus mode (One Shot AF or AI Servo AF) by holding down the AF Mode Selector button and turning the Main Dial. Refer to “Selecting the AF Mode” on page 9-2.

10 Select a shooting mode by holding down the Shooting Mode Selector button and turning the Main dial. Refer to “Selecting the Shooting Mode” on page 8-11.

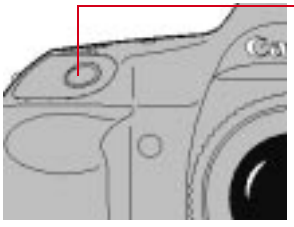
11 Select a metering mode by holding down the Metering Mode Selector button and turning the Main dial. Refer to “Selecting the Metering Mode” on page 8-30.



12 Select a drive mode (single or continuous) or a self-timer mode (2-second delay or 10-second delay) by pressing the Drive button then turning the Main dial. Refer to “Changing the Drive Mode” on page 10-3.



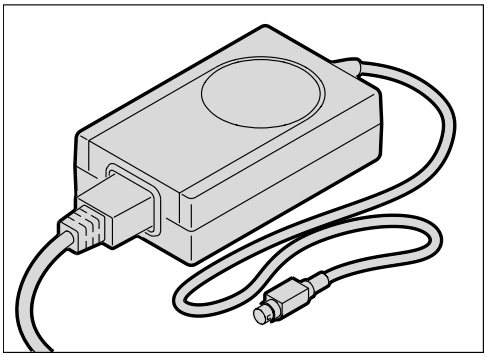
13 Set the ISO value by holding down the AF Mode Selector and the Metering Mode Selector buttons and turning the Main dial. Refer to “Setting the ISO” on page 8-10.



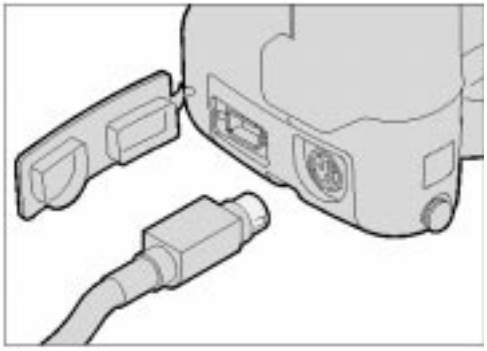
14 Lightly press the Shutter Release to wake the camera.

The AC Adapter

When working indoors, conserve your battery and power your camera by using the AC adapter that is provided with your camera (except with the base camera kit). Refer to “AC Adapter” on page 3-12.



Connecting the AC Adapter



1. Plug the AC adapter into the camera; the unit plugs into the round connector on the side of the camera.
2. Select the universal power cord that is appropriate for your area.
3. Plug the appropriate end of the power cord into the AC adapter.
4. Plug the power cord into a wall outlet.

Optional Settings Before You Start

Setting the Date and Time



1. Select the Menu icon, then choose Main Menu from the dropdown menu. Refer to “Navigation Techniques” on page 2-11.
2. Select Date/Time from the Main menu.

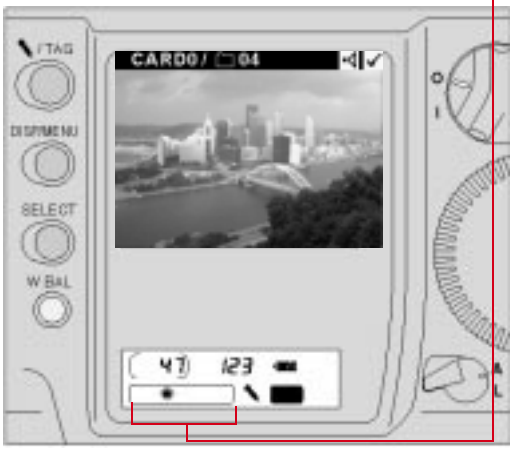
   The Date/Time screen appears. There are six fields: year, month, day, and hour, minutes, seconds.
3. Press and hold the SELECT button and rotate the Quick Control dial to change the highlighted field.
4. Release the SELECT button to accept the change and highlight the next field.

   To leave a field unchanged, press and release the SELECT button without using the dial.

   ☞ When the seconds field is highlighted and you press the SELECT button, the seconds stop counting so you can set that field.
5. Press and release the DISP/MENU button to return to the Main menu.

Setting White Balance

There are two ways to set white balance: preset (which provides preset settings) and custom (which you base on a specific image). Refer to “White Balance” on page 8-1.



1. Press and hold the W.BAL button and rotate the Quick Control dial to highlight the desired White Balance icon on the Back LCD Panel.
2. Press and release the DISP/MENU button to return to the Main menu.

Selecting a PC Card or Folder

Images are stored on the PC Card in folders. There is always at least one empty folder on your PC Card. When you store an image in an empty folder, a new empty folder is automatically created. The new folder is called FolderX, with X being the next number available.

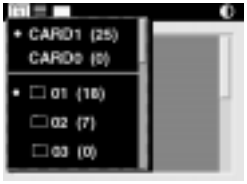


1. Select the Folder icon (page 2-11).

   If there is no PC card in the camera, an X appears within the Folder icon. Selecting the icon produces a No Card message:



With one PC Card, this dropdown menu appears with a • displayed next to the currently active folder.



With two PC Cards, this dropdown menu appears with a • displayed next to the currently active card and the currently active folder on that card.

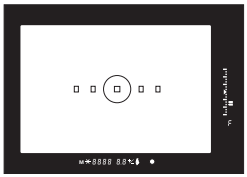
A 0 or 1 appears in the Folder icon, indicating the active PC Card.

The listed folders are on the active card. The folder list changes when you change cards.

2. Continue pressing the DISP/MENU button.
3. With two PC Cards, select CARD0 or CARD1 from the dropdown menu (page 2-11), then select a folder. With one card, select a folder.

Capturing Images







1 Look through the viewfinder eyepiece and frame the scene within the inner rectangle of the Focusing Screen.

☛ The focusing screen provides a view of the scene matching the size of the image that will be recorded on the imager.

2 Press the Shutter button to capture the image.

Reviewing Images on Your Camera

You can display one, four or nine camera images on the Image Display.





1. Select the Display icon. Refer to “Navigation Techniques” on page 2-11.

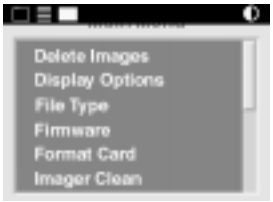
   The Display menu appears.

2. Select Single, Four, or Nine Image Review mode.

   One, four, or nine images from the currently selected folder are displayed.

3. Press and hold the SELECT button and rotate the Quick Control dial clockwise or counter-clockwise to scroll through the images in the currently selected folder. Release the SELECT button to select an image.

Setting Display Contrast





1 Select the Contrast icon. Refer to “Navigation Techniques” on page 2-11.

A gray scale bar is displayed at the side of the image and a slider is displayed across the top.

2 Press and hold the SELECT button and rotate the Quick Control dial clockwise or counter-clockwise to move the slider. Continue until you achieve the desired contrast.

The displayed image changes to reflect the contrast adjustment, as does the gray scale bar.

☛ With proper contrast, the gray scale bar will run from black to white, with clearly defined steps in between.

Setting Display Options

You can view areas of overexposure, an exposure histogram, and information about the selected image.





1 Select the Menu icon, then choose Main Menu from the dropdown menu. Refer to “Navigation Techniques” on page 2-11.

2 Select Display Options from the Main menu.

The Display Options screen appears. A checkmark next to an option indicates that it is on.

4 Press and hold the SELECT button and rotate the Quick Control dial to turn an option on or off.

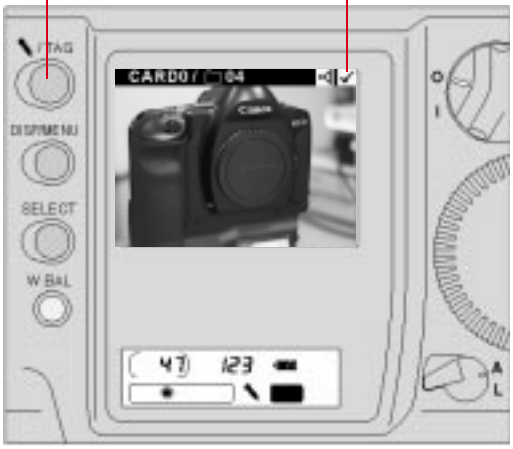
If you turn on Highlighting, any overexposed areas of the image blink.

If you turn on Histogram/Info while in Single Image Review mode, the Histogram and exposure info appear.

Refer to “Setting Display Options” on page 11-6.

Tagging Images

You can tag images to be identified for processing or NOT to be deleted. Images retain their tags when acquired using the DCS Host software where you can select tagged or untagged images and perform a variety of operations. Refer to the KODAK PROFESSIONAL DCS Host Software User's Manual on the DCS Host Software CD included with your camera.



1. Select an Image Review mode.
2. Select an image.
3. Press and release the RECORD/TAG button.

☛ If you press the button for more than one second, your camera records sounds rather than tagging an image.

A Tag icon appears above the image at the top right of the Menu Bar.

☛ You can also tag the last image captured until you perform another operation or the camera enters Powersave mode. This is true whether the Image Display is on or off, and regardless of the current Review mode. Simply press and release the RECORD/TAG button.

Deleting Images

Deleting a Single Image



1. Press and hold the DISP/MENU button and the SELECT button at the same time.

   If the Image Display is off, it turns on.

   The Delete Image screen appears showing the current image.

2. Release the DISP/MENU button.

3. While continuing to hold the SELECT button, use the Quick Control dial to highlight Yes, No, or Done.

   If you choose Yes, the current image is deleted and the next image appears.

   If you choose No, the current image is not deleted and the next image appears

   If you choose Done, the current image is not deleted and the screen goes away.

Deleting More Than One Image

Delete all images on the PC Card, all images in a folder, all untagged images on the PC Card, or all untagged images in a folder.



1. Tag any images that you DO NOT want to delete.
2. Select the Menu icon, then choose Main Menu from the dropdown menu. Refer to “Navigation Techniques” on page 2-11.
3. Select Delete Images from the Main menu.

   The Delete Images menu appears.
4. Select the desired option.

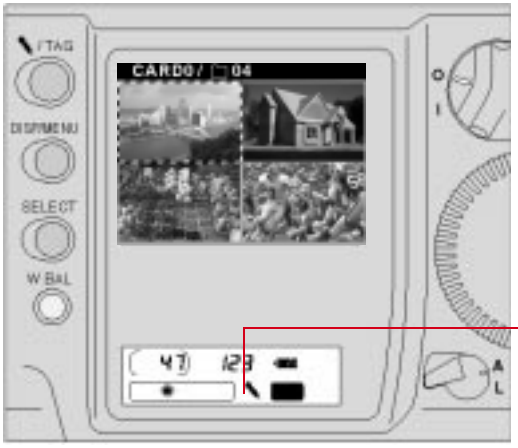
   A confirmation dialog box appears.
5. Select Yes or No.

☛ Remember that if you choose one of the tagged image options, images that you tag are NOT deleted.

6. Press and release the DISP/MENU button to return to the Main menu.

Associating a Sound File with an Image

You can record sound files for your images, then play back the sound files using the DCS Host software (if your computer has a sound board).

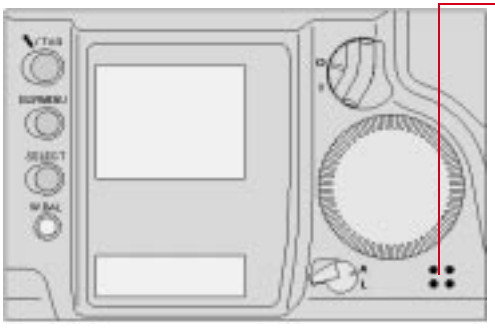


1 Select an image.

☛ This is not necessary if you wish to associate a sound file with the last image captured.

2 Press and hold the RECORD/TAG button.

A Microphone icon appears in the Back LCD Panel. This indicates that you can begin recording.



3 Speak into the microphone while continuing to press the RECORD/TAG button.

4 Release the RECORD/TAG button.

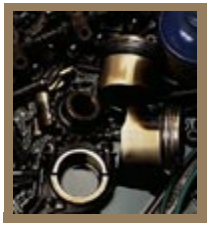
The recording stops and the Microphone icon disappears from the Back LCD Panel.



A Sound icon appears in the Menu bar, indicating that the currently selected image has one or more associated sound files.

You cannot record sounds and the Microphone icon will not be displayed in the Back LCD panel under the following circumstances:

- ✔ No image in the current folder
- ✔ You are using the Host software in Test Shot mode. (Refer to the KODAK PROFESSIONAL DCS Host Software User's manual on the CD included with your camera.)



Controlling Exposure and Color Balance

This section describes the functions available for controlling exposure in your camera.

White Balance

When you select a white balance option, you identify the type of lighting used to capture images. For example, if you capture an image in daylight, set the white balance to daylight for the best results.

Use either preset or custom methods for specifying white balance. The preset options include Auto, Daylight, Tungsten, Fluorescent, and Flash. With the custom option, you can save White Balance settings, reuse them, and delete them when they are no longer needed.

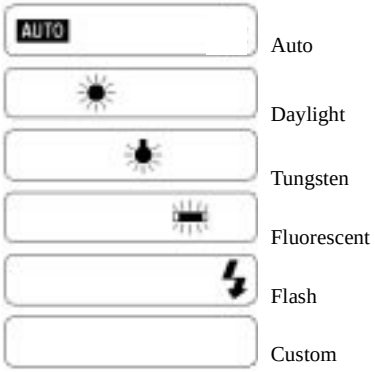
IMPORTANT:

White balance affects how your color image is captured. Using the incorrect setting may cause inferior results.

Be careful not to cover the white balance sensor window on the front of the camera as this will affect auto white balance settings.



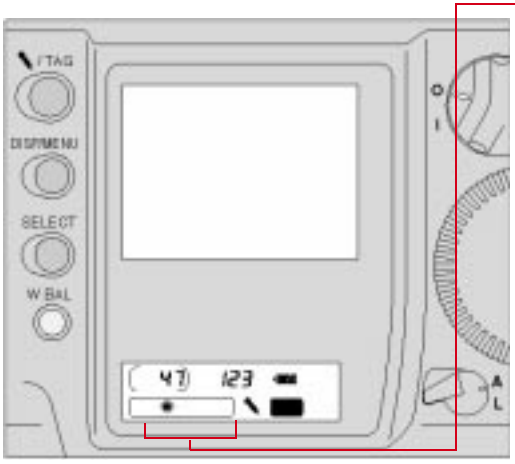
To determine the current white balance setting, check the White Balance icons on the Back LCD panel.



The icons reflect the current setting.

White Balance Setting	Color Temperature (Degrees Kelvin)
Daylight	5500
Tungsten	3200
Fluorescent	5000
On-Camera Flash	5600

Selecting a White Balance Setting



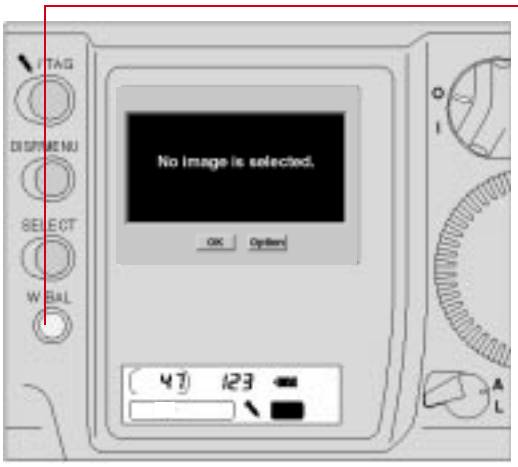
1. Press and hold the W.BAL button and rotate the Quick Control dial to highlight the desired White Balance icon on the Back LCD Panel.
2. Press and release the DISP/ MENU button to return to the Main menu.

Using Custom White Balance

With the custom option, you can save White Balance settings, reuse them, and delete them when they are no longer needed. This method provides the best possible color balance, but it requires a bit more preparation than the Preset mode.

Using White Balance Settings

Once you have selected Custom White Balance, you can access several Custom White Balance functions.



1 Press the W.BAL button.

If the Image Display was off, it turns on.

If there are no images in the folder, the screen at the left appears.

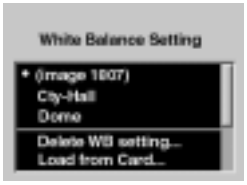


If the selected folder contains images, this screen appears, showing the currently selected image.

2 Press and hold the SELECT button and rotate the Quick Control dial to select your choice:

OK—The White Balance values from the selected image are saved using the same name as the image. The setting is applied to subsequently captured images. (It overwrites the setting saved the last time you chose OK.)

Cancel—The White Balance setting does not change.



Options—The White Balance Settings menu appears. You can:

- ✔ Select a White Balance setting from those loaded on the camera (page 8-6)
- ✔ Delete a White Balance setting from the camera (page 8-6)
- ✔ Load a White Balance setting from a PC Card to the camera (page 8-7)

Selecting White Balance Settings

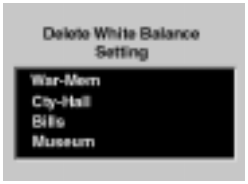
With the White Balance Settings menu displayed (page 8-5), choose one of the following:

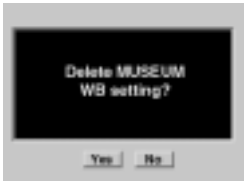
Image #nnnn: The White Balance values from the selected image are applied to images that you capture.

Previously loaded setting—The White Balance values from the previously loaded setting (page 8-7) are applied to images that you capture.

Deleting White Balance Settings

You can delete White Balance Settings that have previously been loaded on your camera.





1. With the White Balance Settings menu displayed (page 8-5), choose Delete WB Settings.

   The Delete White Balance Setting menu appears.

2. Press and hold the SELECT button and rotate the Quick Control dial to choose the setting to be deleted.

3. Release the SELECT button.

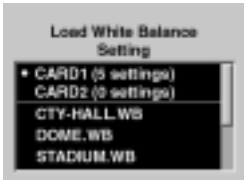
   A confirmation screen appears.

4. Select Yes to delete the setting, or No to leave it intact.

Loading White Balance Settings

Once you have saved White Balance settings to a PC Card, load them into your camera. There are a few rules to remember when you do so. If you should forget any of the rules, an appropriate error message appears, as shown in the table below.

Rule	Error Message
You can only load settings into the camera that was originally used to capture the images.	
Each setting that you load must have a unique name.	
Your camera will hold up to ten Custom White Balance settings.	



1 With the White Balance Setting menu displayed (page 8-5), choose Load from Card.

The Load White Balance Setting screen appears with a list of the White Balance settings on the active PC Card. (If only one card is in the camera, the card choices do not appear.)

2 Select a PC Card. (You may need to scroll up to the card choices if there are numerous White Balance settings.)

3 Select a Custom White Balance setting.

The setting is loaded from the PC Card to your camera, and subsequently appears in the list of settings.

☞ When you load settings from a PC Card, the last setting loaded is the active White Balance setting.

Saving White Balance Settings using your Camera

You can save the current camera-generated White Balance settings, then apply the settings to subsequently captured images.



1. Capture an image with a neutral area (such as a gray or white card) in the center.
2. With the White Balance Setting screen displayed, choose Save (Image nnnn).

   A confirmation screen appears.
3. Select Yes to save the setting or No to return to the White Balance Settings menu without saving.

   If you save the setting, it appears on the White Balance Settings and the Delete White Balance Settings screens.

Saving White Balance Settings using the Computer

You can also save White Balance settings to a PC Card using the DCS Acquire Module or DCS TWAIN Data Source, then load the settings in your camera.

1. Capture an image with a neutral area (such as a gray or white card) in the center.
2. Using the DCS Acquire Module or DCS TWAIN Data Source, save the White Balance setting to a PC Card. (Refer to the KODAK PROFESSIONAL DCS Host Software User's Manual.)

☞ When you save a White Balance setting to a PC Card, a ".wb" extension is added to the file name. For example, if you save the setting from a file named *A0601385.TIF*, the setting will be named *A0601385.wb* on the PC Card.

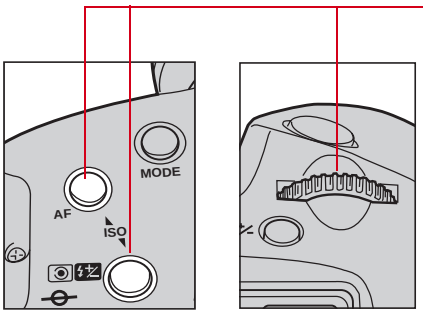
3. On your camera, select Custom White Balance (page 8-3).
4. Load the White Balance setting from the PC Card to your camera (page 8-7).
5. Select the desired Custom White Balance setting (page 8-6).

Setting the ISO

You can set the ISO on the camera within the range of:

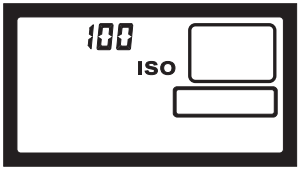
DCS 520: 200-1600

DCS 560: 80 - 200



1 While simultaneously holding down the AF Mode Selector button and Metering Mode Selector/Flash Exposure Compensation button, turn the Main dial to the left or right until the desired ISO is displayed in the Top LCD panel.

When the AF Mode Selector button and Metering Mode Selector button are pressed simultaneously, "ISO" and the currently set ISO are displayed in the Top LCD panel.



2 Release the AF Mode Selector button and Metering Mode Selector/Flash Exposure Compensation button to complete the ISO setting.

☞ In selecting an exposure setting, begin with lower exposure index settings; reserve the use of higher speeds for situations requiring their use. Higher speeds may result in lower-quality images than lower speeds. (You may notice noise in the image.) For this reason, as with film, you may want to use a flash and a lower ISO setting.

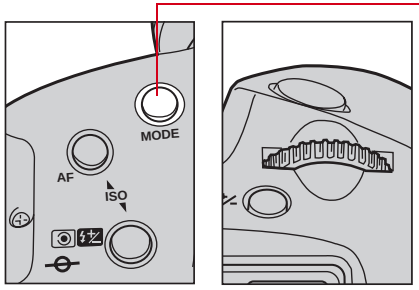
Selecting the Shooting Mode

Your camera provides the following shooting modes:

- ✔ Program AE
- ✔ Shutter-priority AE
- ✔ Aperture-priority AE
- ✔ Depth-of-Field AE
- ✔ Manual exposure
- ✔ Bulb exposure.

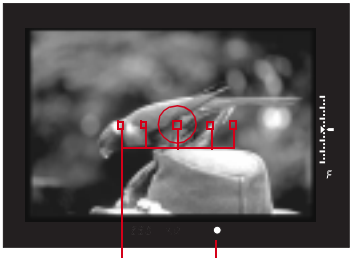
Program AE Mode [P]

In Program AE mode the camera automatically sets the Shutter speed and aperture value according to the subject brightness. This mode allows anyone to start capturing images quickly without worrying about exposure settings. Five focusing points provide a wide focusing area, making it easy to try out various picture compositions.



1 Turn on the camera by setting the Main switch to (**A**).

2 Press and hold the Shooting Mode Selector button while turning the Main dial until “P” appears in the Top LCD panel.



3 Look through the viewfinder and cover the subject with one of the five focusing points, then press the Shutter button halfway to focus.

When the subject is focused, the AF frame used for focusing temporarily lights red and the viewfinder’s In-focus indicator lights up in One-shot AF mode.





☛ If the In-focus indicator blinks, the autofocus system cannot focus the subject and the Shutter will not release. Refer to the section on Manual Focusing in Chapter 8 for instructions on how to focus the subject manually.

Exposure settings are displayed in the Top LCD panel and viewfinder Display.

4 After confirming that the exposure settings are not blinking, press the Shutter button to capture the image.

✔ If a shutter speed of 30” and the maximum aperture value blink in the viewfinder display, the subject is too dark. Switch to flash photography or choose a higher ISO setting. (Both are described later in this chapter.)



✔ If a shutter speed of 8000 and the minimum aperture value blink in the viewfinder display, the subject is too bright. Attach a neutral density (ND) filter to the lens or choose a lower ISO setting.

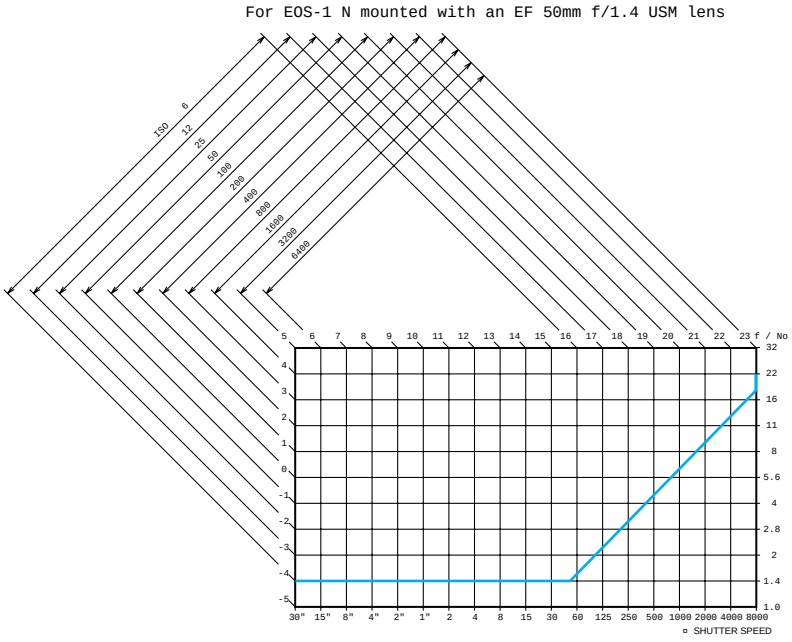


Program Shift Function

When capturing images in Program AE mode, you can “shift the program” to change the set shutter speed and aperture value combination while maintaining the same exposure. After pressing the Shutter button halfway, turn the Main dial until the desired Shutter speed/aperture value combination is displayed.

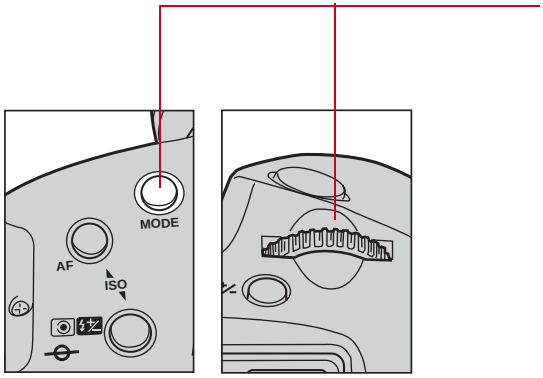
Program Line Characteristics

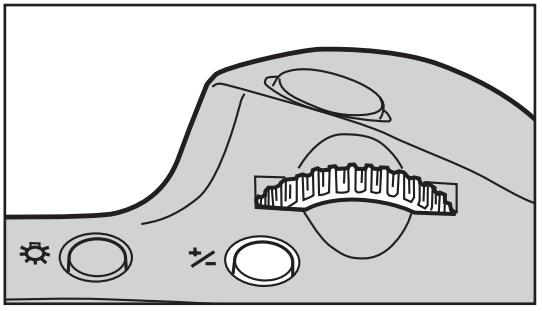
Program characteristics for Program AE [P] mode using an EF50mm f/1.4 USM lens.



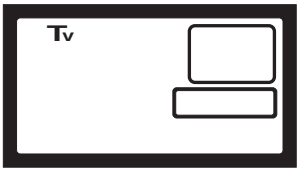
Shutter-priority AE [Tv]

In this mode, you set the shutter speed and the camera automatically sets the aperture according to the lighting conditions.





1 Press and hold the Shooting Mode Selector button and turn the Main dial until “Tv” appears in the Top LCD panel.

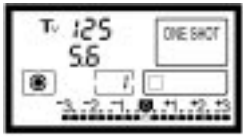


2 Release the Shooting Mode Selector button.

3 Turn the Main dial until the desired shutter speed appears in the viewfinder or Top LCD panel.

4 Press the Shutter button halfway to focus the subject and confirm the exposure.

The shutter speed and corresponding aperture value are displayed in the viewfinder and Top LCD panel.





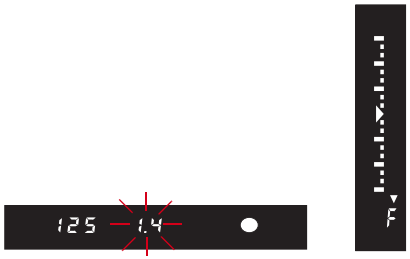
5 After confirming the aperture value, press the Shutter button completely to capture the image.

IMPORTANT:

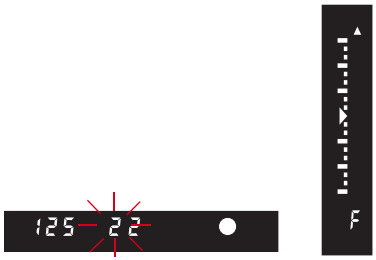
If the aperture value is not blinking, the image will be properly exposed.

Tips

✔ When the number for the maximum aperture of the lens blinks in the display, the image will be underexposed. Turn the Main dial to a slower shutter speed so the aperture display stops blinking.



✔ When the number for the minimum aperture of the lens blinks in the display, the image will be overexposed. Turn the Main dial to a faster shutter speed so the aperture display stops blinking.



Shutter Speed Display

Shutter speeds are normally set in 1/3-stop increments. From 8000 to 4, the shutter speeds are displayed as the reciprocal of the actual time values. For example, 125 on the display indicates a shutter speed of 1/125 seconds. For shutter speeds slower than 4, actual times are displayed. For example, 0”3 on the display indicates a shutter speed of 0.3 seconds, and 15” indicates a speed of 15 seconds. The following shutter speeds are available:

8000 6400 5000 4000 3200 2500 2000 1600 1250 1000 800 640 500 400
320 250 200 160 125 100 80 60 50 40 30 25 20 15 13 10 8 6 5 4
0”3 0”4 0”5 0”6 0”8 1” 1”3 1”6 2” 2”5 3”2 4” 5” 6” 8” 10” 13” 15” 20”
25” 30”

IMPORTANT:

Long exposures may add noise and produce a less desirable image. For quality purposes, single image exposure of more than one second is not recommended.

Custom Function F-6

(page 6-6)

In addition to 1/3-stop increments, shutter speeds can also be input in 1-stop or 1/2-stop increments. In these cases, available shutter speeds are as follows:

1-stop increments

8000 4000 2000 1000 500 250 125 60
30 15 8 4 0”5 1” 2” 4” 8” 15” 30”

1/2-stop increments

8000 6000 4000 3000 2000 1500 1000 750
500 350 250 200 180 125 90 60 45
30 20 15 10 8 6 4 0”3 0”5 0”7 1”
1”5 2” 3” 4” 6” 8” 10” 15” 20” 30”



Using a fast shutter speed
(1/1000 sec. at f/5.6)

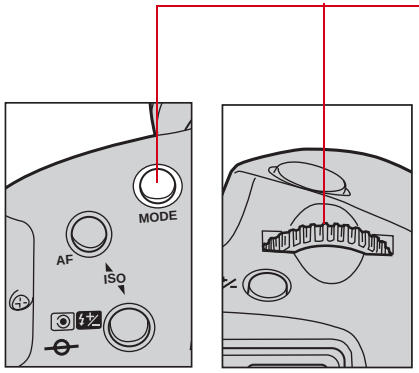


Using a slow shutter speed
(1/60 sec. at f/22)

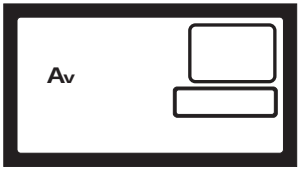
*Using an EF200mm f/2.8L USM lens

Aperture-priority AE [Av]

In this mode, you set the aperture and the camera automatically sets the shutter speed according to the lighting conditions.

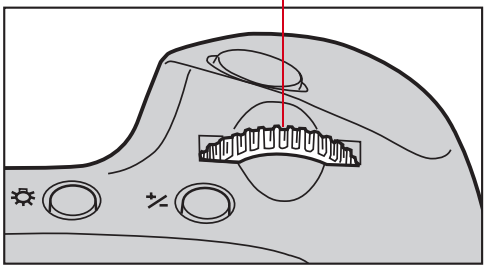


1 Press and hold the Shooting Mode Selector button and turn the Main dial until “Av” appears in the Top LCD panel.



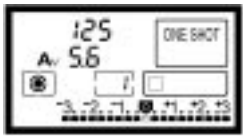
2 Release the Shooting Mode Selector button.

3 Turn the Main dial until the desired aperture value appears in the viewfinder or Top LCD panel.



4 Press the Shutter button halfway to focus the subject and confirm the exposure.

The aperture value and corresponding shutter speed are displayed in the viewfinder and Top LCD panel.





5 After confirming the shutter speed, press the Shutter button to capture the image.

☛ If the shutter speed is not blinking, the image will be properly exposed.

☛ When the camera is hand-held, camera shake may produce an unsharp picture if the shutter speed is slower than 1/focal length of the lens in use.

Tips

✔ When a shutter speed of 30” blinks, the image will be underexposed. Turn the Main dial to set a larger aperture (smaller aperture number) so the shutter speed stops blinking.



✔ When a shutter speed of 8000 blinks, the image will be overexposed. Turn the Main dial to set a smaller aperture (larger aperture number) so the shutter speed stops blinking.

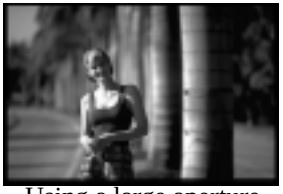


Aperture Value Display

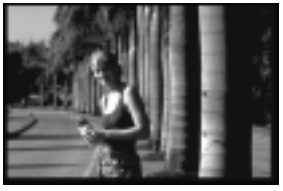
Apertures are set in 1/3-stop increments. Larger numbers indicate smaller lens apertures. The following aperture settings are provided in the camera, but the actual aperture range available depends on the lens in use.

1.0 1.1 1.2 1.4 1.6 1.8 2.0 2.2 2.5 2.8 3.2 3.5 4.0 4.5 5.0 5.6 6.3 7.1
8.0 9.0 10 11 13 14 16 18 20 22 25 29 32 36 40 45 51 57 64 72 81 91

Custom Function F-6 (page 6-6)	In addition to 1/3-stop increments, aperture values can also be input in 1-stop or 1/2-stop increments. In these cases, available aperture values are as follows: **1-stop increments** 1.0 1.4 2.0 2.8 4.0 5.6 8.0 11 16 22 32 45 64 91 **1/2-stop increments** 1.0 1.2 1.4 1.8 2.0 2.5 2.8 3.5 4.0 4.5 5.6 6.7 8.0 9.5 11 13 16 19 22 27 32 38 45 54 64 76 91



Using a large aperture
(1/1000 sec. at f/2.0)



Using a small aperture
(1/60 sec. at f/16)

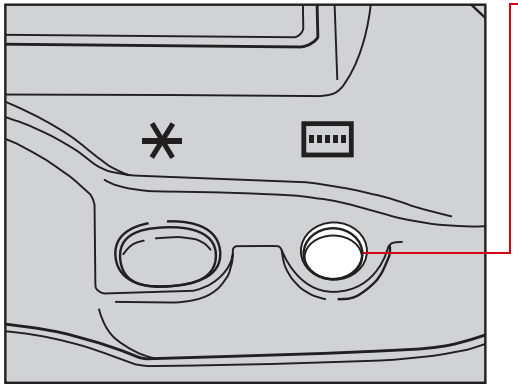
Using an EF50mm f/1.4 USM lens

Depth-of-Field AE [DEP]

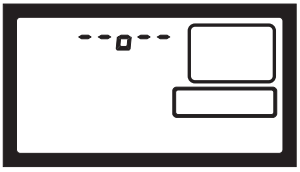
This mode places everything between two points, one in the foreground and one in the background within the zone of focus, effective for making sure everyone in a large group picture or everything in a landscape photo is rendered sharp. After you designate the near and far points in the scene, the camera automatically sets the optimum focus position and the aperture necessary to achieve the required depth of field, then sets the shutter speed to achieve the correct exposure. The near and far points can be designated using the selected focusing point in Manual Focusing Point Selection mode, or using the center point in Automatic Focusing Point Selection mode.

- Depth-of-field AE is not possible when the lens' Focus Mode switch is set to (**M**) Make sure the Focus Mode switch is set to (**AF**).
- When using DEP AE mode with your camera connected to a computer, it is recommended that you set point 1 and point 2 by manually pressing the Shutter button halfway after aiming at these points. Do not use the computer control to press the Shutter button in this situation.

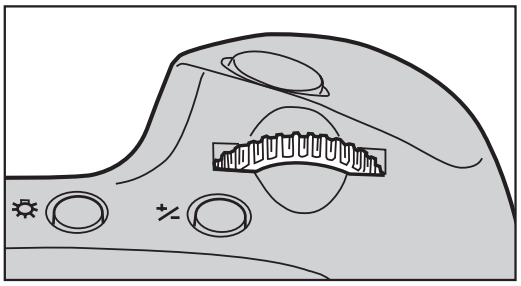
Using Manual Focusing Point Selection Mode



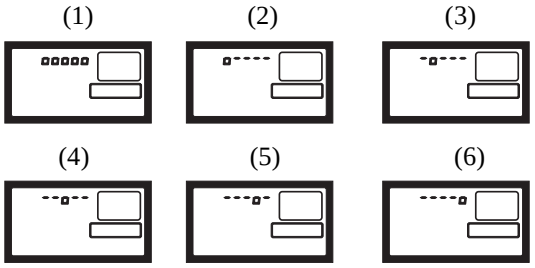
1. Press the Focusing Point Selector button.
2. The currently selected focusing point lights red in the viewfinder and the Focusing Point indicator is displayed in the Top LCD panel.



All five focusing points light up in the viewfinder and Top LCD panel when the camera is set for Automatic Focusing Point Selection mode.



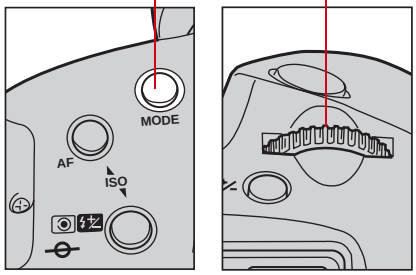
3 Turn the Main dial to select the desired focusing point.



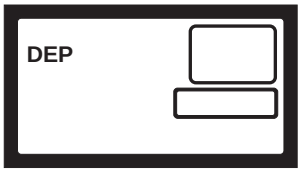
The focusing points are selected in the following order: (1) automatic focusing point selection (all five focusing points are displayed), (2) far left, (3) left center, (4) center, (5) right center, (6) far right

The selected focusing point lights red in the viewfinder and is also displayed in the Top LCD panel.

4 Press the Shutter button halfway, or allow six seconds to elapse to complete the setting.



5 Press and hold the Shooting Mode Selector button and turn the Main dial until "**DEP**" appears in the Top LCD panel.



6 Release the Shooting Mode Selector button.



7 Place the selected focusing point on the nearest point you want in focus (point 1), then press the Shutter button halfway.





*When the In-focus indicator and "*dEP 1*" light up in the viewfinder, remove your finger from the Shutter button.*



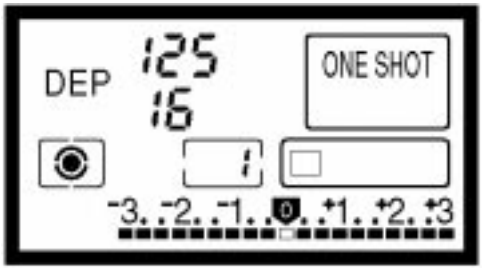
8 Place the same focusing point on the farthest point you want in focus (point 2), then press the Shutter button halfway again.

When the In-focus indicator and "dEP 2" light up in the viewfinder, remove your finger from the Shutter button.





☞ Points 1 and 2 can be reversed if desired.





9 Compose the picture and press the Shutter button halfway to set the aperture and focus for the designated depth of field.

The correct aperture value for the designated depth of field and the corresponding shutter speed are displayed in both the viewfinder and Top LCD panel.

If you remove your finger from the Shutter button, the display changes to "dEP" *and the aperture value.*

☛ The exposure is determined immediately before the shutter is released.

10 Press the Shutter button completely to capture the image.



Using Automatic Focusing Point Selection Mode

In automatic focusing point selection mode, use the center focusing point to designate the near and far focus points. Otherwise, the basic procedure is the same as for manual Focusing Point Selection mode.

Warning Indications

- ✔ If the aperture value blinks, the desired depth of field cannot be obtained. Use a wide-angle lens or move farther from the subject and repeat steps 4 through 6 on the preceding pages.
- ✔ If the shutter speed of 30” and the maximum aperture of the lens blink, the scene will be underexposed and Depth-of-Field AE cannot be carried out. Consider using flash.



- ✔ If the shutter speed of 8000 and the minimum aperture of the lens blink, the scene will be overexposed. Select a lower ISO or use a neutral density (ND) filter to reduce the amount of light entering the lens.



Tips

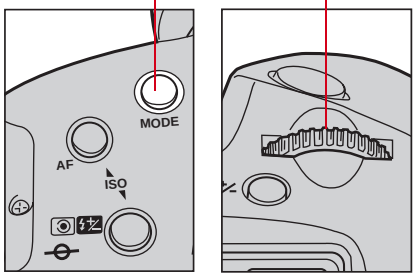
- ✔ When using a zoom lens, do not zoom until you finish capturing the image.
- ✔ Changing the focusing point during Depth-of-Field AE operation cancels any previously set data.
- ✔ Flash cannot be used effectively in Depth-of-Field AE mode. Use of flash will provide the same result as using flash in Program AE mode.
- ✔ When using a lens equipped with a focus range selector (such as the EF300mm f/2.8L USM), be sure to set it to the maximum range.
- ✔ With a slow shutter speed, use a tripod to prevent camera shake.
- ✔ To cancel Depth-of-Field AE in mid-operation, press the Focusing Point Selector button, the Shooting Mode Selector button, the AF mode Selector button or the Metering Mode Selector button.
- ✔ For greater depth of field, use a wide-angle lens.
- ✔ For shallow depth of field, place both points 1 and 2 on the same point. This method is effective for blurring the foreground and background when shooting portraits. Use a telephoto lens for best effect.

Manual Exposure [M]

This mode lets you set both the shutter speed and aperture. Use this mode when you need complete control of exposure for creative effects or when using a hand-held exposure meter.

The Main dial sets the shutter speed and the Quick Control dial sets the aperture.

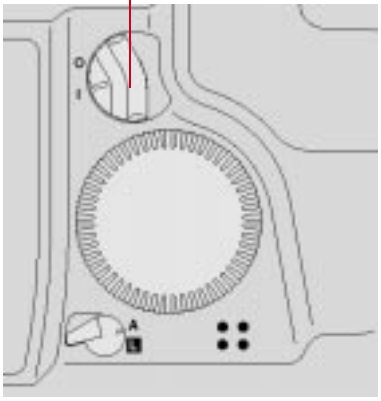
Using the Camera's Built-in Meter



1 Press and hold the Shooting Mode Selector button and turn the Main dial to the left or right until "M" appears in the Top LCD panel.



2 Release the Shooting Mode Selector button.



3 Set the Quick Control Dial switch to (|).

4 Turn the Main dial to the desired shutter speed and the Quick Control dial to the desired aperture.



The ⇦ indicator shows that the set exposure will be one stop over the metered exposure.

5 Press the Shutter button halfway to focus the subject. “M” and the exposure values are displayed in the viewfinder. The Exposure Level indicator at the right of the viewfinder shows how far the current exposure setting is from the exposure value metered by the camera.

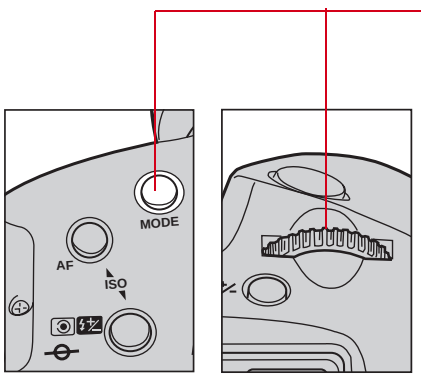
6 Set the shutter speed and aperture value as desired while watching the exposure level display, then press the Shutter button completely to take the picture.

Custom Function F-5 (page 6-6)	This custom function lets you switch the functions of the Main dial and Quick Control dial.
Custom Function F-6	In addition to 1/3-stop increments, shutter speeds and aperture values can also be input in 1-stop or 1/2-stop increments.
Custom Function F-11	This function lets you set the aperture value using the Focusing Point Selector button(·····) in combination with the Main dial.

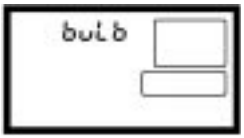
Bulb Exposure [buLb]

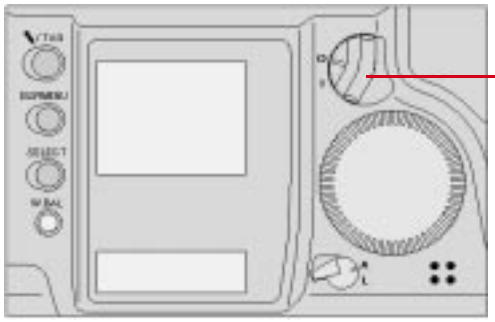
The shutter stays open for as long as you press the Shutter button. By connecting the optional Remote Switch RS-80N3 to the camera's remote control socket, you can keep the shutter open without holding the Shutter button pressed. Use this mode when long exposures are required, such as for pictures of night scenes and fireworks displays.

☛ See your Canon dealer regarding the Remote Switch RS-80N3.



1 Press and hold the Shooting Mode Selector button and turn the Main dial until "buLb" appears in the Top LCD panel.

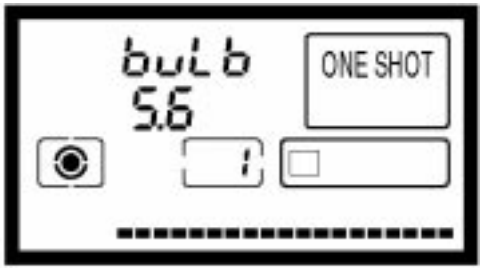




2 Release the Shooting Mode Selector button.

3 Set the Quick Control dial switch to (|).

4 While looking at the Top LCD panel, turn the Main dial or Quick Control dial until the desired aperture value appears in the display.

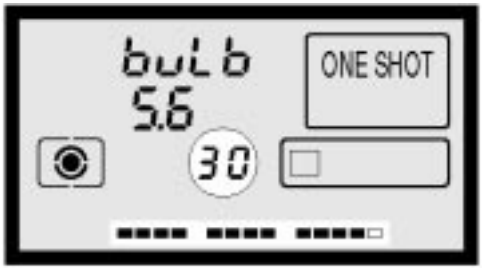


5 Press the Shutter button completely and hold it for the desired length of time.

IMPORTANT:

Long exposures may add noise and produce a less desirable image. For quality purposes, an exposure time of more than one second is not recommended.

In Bulb Exposure mode, the Top LCD panel's frame counter display counts the elapsed time from when the shutter was released, starting over every 30 seconds. One bar (■■■■) appears on the display after every 30 seconds, allowing time measurement up to 120 seconds using all three bars.

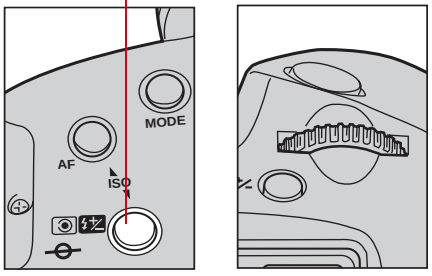


☞ The Top LCD panel illumination is turned off during bulb exposure operation.

Selecting the Metering Mode

Three metering modes are available: Evaluative metering ( ), Partial metering( ) and Fine Spot metering (●). (Center Weighted Average metering as well as Spot metering linked to the focusing points can also be set with the corresponding custom function.) In all metering modes, pressing the Shutter button halfway activates the built-in metering system and determines the exposure.

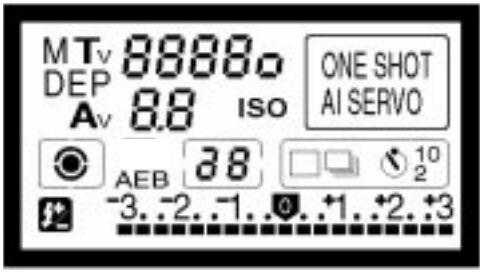
Whether outdoors, indoors, at the sea or in the mountains, there are infinite lighting conditions and subject types. Select the metering mode best suited for each subject.



1 Press and hold the Metering Mode Selector button and, turn the Main dial to the left or right until the desired metering mode indicator appears in the Top LCD panel.



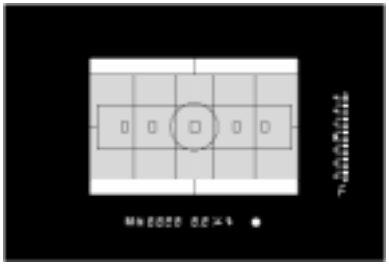
The metering mode changes in the cyclical sequence shown above.



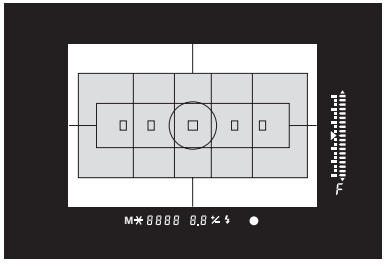
2 Release the Metering Mode Selector button.

Evaluative Metering

DCS 520



DCS 560



Use Evaluative metering (👁) for general subjects and backlit scenes. By dividing the viewfinder into 12 metering zones linked with the five focusing points, the camera evaluates subject size, position (based on the focusing point in use), brightness, background, front lighting and back lighting to determine the best exposure setting. In manual focusing mode, evaluative metering is based on the central focusing point.

☛ When the subject is lit by strong backlighting or a narrow beam of light such as a spotlight, we recommend using Partial metering(◌) or fine spot metering(●).

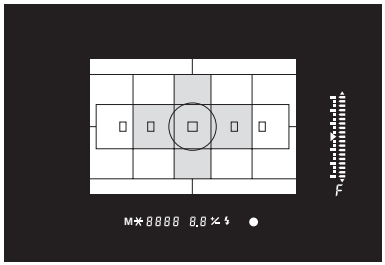
Custom Function F-8

(page 6-6)

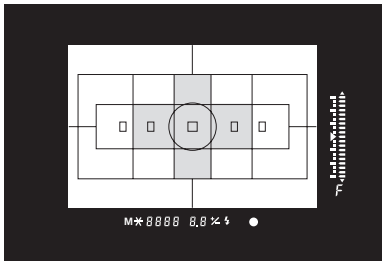
This function lets you select Center Weighted Average metering instead of Evaluative metering (👁).

Partial Metering

DCS 520



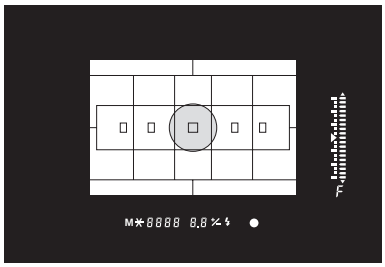
DCS 560



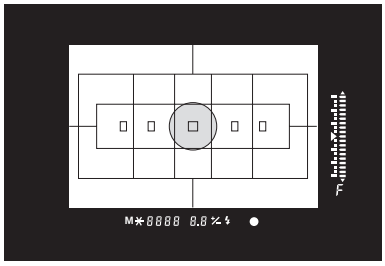
Partial metering (⬭) limits the metering area to the center of the viewfinder (approximately 23% of the image area for the DCS 520 and 15% for the DCS 560). Select this mode when the subject is backlit or near a strong light source.

Fine Spot Metering

DCS 520



DCS 560



Fine Spot metering (●) limits the metering area to the center of the viewfinder as defined by the Fine Spot metering mark (approximately 6% of the image area for the DCS 520 and 4% for the DCS 560). Use this mode when you need an accurate exposure reading of a specific subject area.
In continuous shooting mode ( ) or high-speed continuous shooting mode with the Power Drive Booster E1 (L H), exposure value determined for the first frame is also used for the second and consecutive exposures.

Custom Function F-13
(page 6-6)

This function lets you select Fine Spot metering linked to the focusing points. Metering is limited to the area of the manually selected focusing point, (approximately 9% of the viewfinder image area for the DCS 520 and 6% for the DCS 560).

☞ In One-shot AF mode, the exposure setting is locked during Continuous Shooting mode, but the AE lock indicator does not light in the viewfinder.

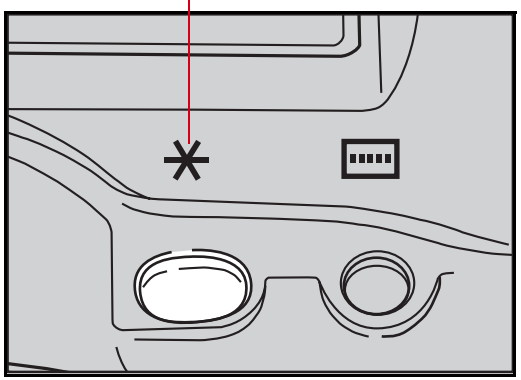
AE Lock

Your camera's evaluative metering system is coupled to the five focusing points. It controls the exposure according to the subject's position, based on the focusing point in use.

If you want to determine the exposure independently from the focusing operation, use AE lock. Use it when you also want to change the composition of the picture after determining the exposure. AE lock is effective for backlit subjects and other situations where there is extremely strong contrast between the subject and the background.

DCS 520 DCS 560





1 Focus the subject that you want to measure with the camera's metering system.

The exposure values are displayed in the viewfinder and Top LCD panel

2 Press the AE lock button.

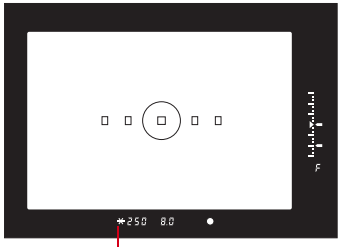
"✳" lights in the viewfinder to indicate that the AE lock is set. When you release the AE lock button (✳), the metering timer is activated and the exposure remains locked for six seconds.

Pressing the AE Lock button (✳) again renews the locked exposure setting.

AE lock is canceled six seconds after the AE Lock indicator "✳" lights in the viewfinder display, or whenever you press the AF Mode Selector button, Metering Mode Selector button, Shooting Mode Selector button, or Focusing Point Selector button.

AE Lock is automatically activated upon focus completion when the camera is set for evaluative metering and One Shot AF. In this case, the (✳) indicator is not displayed in the viewfinder. The AE Lock is automatically cancelled when you capture an image or when you remove your finger from the Shutter button, whichever comes first.

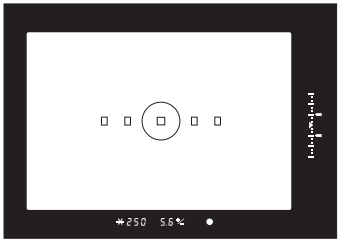
To accurately meter a specific subject area with AE lock, use Partial metering or Fine Spot metering. Place the subject in the center of the viewfinder when activating AE lock.



3 Refocus the subject, change the composition as desired, and capture the image.

When you change the scene composition, the difference between the locked exposure value and the continuously metered exposure value is displayed in the viewfinder in real-time.





If you use AE lock to register a shadow reading of your subject and then change the scene composition to read a highlight area (or vice versa), you can then use exposure compensation to adjust the exposure level based on the brightness range of the scene. (Refer to the section on “Exposure Compensation” later in this chapter.

Custom Function F-4
(page 6-6)

This custom function lets you lock the exposure with the Shutter button instead of the AE Lock button (✻). Pressing the AE Lock button activates autofocusing.

When using One-shot AF together with Evaluative metering, the exposure reading is automatically locked when you press the Shutter button halfway.

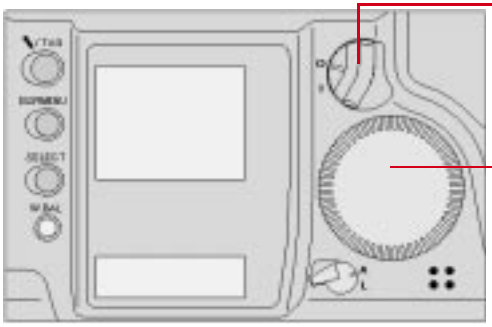
When using One-shot AF together with Fine Spot or Partial metering, the exposure setting is locked only during Continuous Shooting mode.

Exposure Compensation

When capturing images in an AE shooting mode, you can compensate the exposure according to the subject conditions either by using the Quick Control dial while looking through the viewfinder or by using the Exposure Compensation button and the Main dial. Exposure can be compensated up to +/-3 stops in 1/3-stop increments.

Custom Function F-6 (page 6-6)	In addition to 1/3-stop increments, the exposure compensation amount can also be input in 1/2-stop increments.

Setting Exposure Compensation



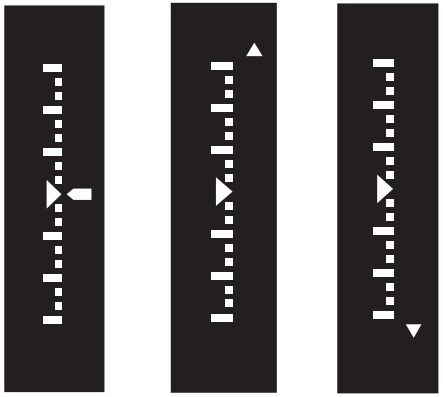
1 Set the Quick Control Dial switch to On (|).

2 Focus the subject and confirm the exposure.

3 Turn the Quick Control dial to set the desired exposure compensation amount.

☛ The Quick Control dial is active only when the Shutter button is half pressed or while the six-second timer is operating

(1) (2) (3)



(1) indicates correct exposure.
(2) indicates more than 3 stops overexposure.
(3) indicates more than 3 stops underexposure.

The exposure level indicator and exposure compensation symbol appearing the viewfinder, and the compensation amount is displayed in the Top LCD panel's exposure level indicator.

In the Top LCD panel, "+" indicates overexposure and "–" indicates underexposure relative to the camera's meter reading.

In the viewfinder display, overexposure and underexposure are indicated respectively by exposure compensation amounts above and below the triangle index at the center of the scale.

4 Set the Quick Control Dial switch to **0** to prevent accidentally changing the setting.

☛ To cancel the exposure compensation, rotate the Quick Control dial to return the Exposure Level indicator to the zero (▷) position.

5 Expose the image.

The exposure compensation amount is not canceled even if the Main switch is set to (L).

If Custom function F-6 is used to set the exposure compensation amount in 1/2-stop or 1/3-stop increments, the Exposure Level indicators in the viewfinder display and in the top LCD panel appear as shown below.



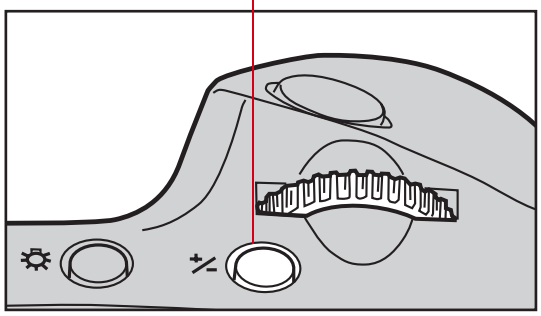
1- 1/2 stops under



1 - 1/3 stops under

Using the Exposure Compensation Button

Exposure compensation can also be carried out using the Exposure Compensation button (⁺∕₋) together with the Main dial.





1 Focus the subject and confirm the exposure.

2 Press and release the Exposure Compensation button, then turn the Main dial (while the six-second timer is activated) to set the desired exposure compensation amount.

3 Capture the image.

☛ The set exposure compensation amount is not canceled even if the Main switch is set to (L).

4 Set the Quick Control Dial switch to (**0**) to prevent accidental operation.

Auto Exposure Bracketing [AEB]

Use auto exposure bracketing to take a sequence of pictures at different exposures. When this function is set, the camera automatically takes three exposures in sequence while shifting the exposure for each image. The bracketing amount can be set in 1/3-stop increments up to +/-3 stops from the metered exposure value. When the Shutter button is pressed, three frames are exposed according to the current Drive mode in the sequence: underexposure, correct (metered) exposure, and overexposure. (Refer to Chapter 9 for more information on Drive mode.)



Underexposure (-1/3)



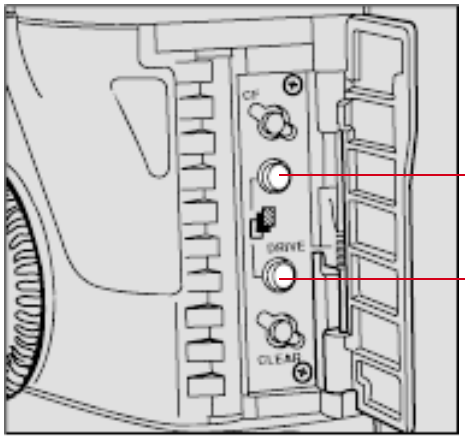
Correct (metered) exposure (0)



Overexposure (+ 1/3)

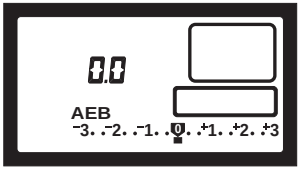
Custom Function F-6 (page 6-6)	The AEB step amount can also be input in 1/2-stop increments.
Custom Function F-9	The shooting sequence can be changed to correct (metered) exposure, underexposure, and overexposure. This function also lets you set the AEB step amount by simultaneously pressing the AF Mode and Shooting Mode selectors while turning the Main dial.

☛ If auto exposure bracketing is used with custom function F-12 set to mirror-up mode, the camera will operate in single exposure mode regardless of the current Drive mode (single exposure, continuous exposure).

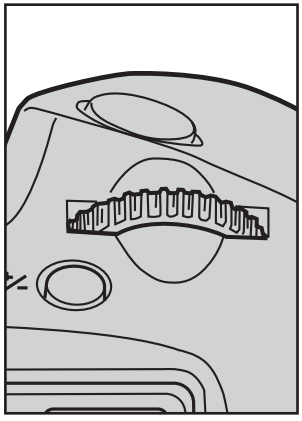


1 Open the Palm door and simultaneously press the unlabeled button and the Drive Mode Selector button.

AEB appears in the Top LCD panel.

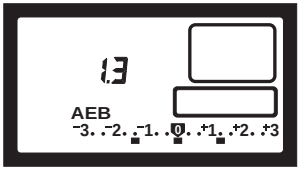


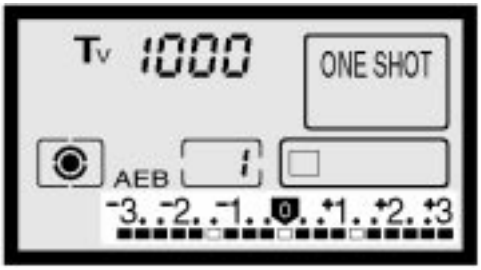
The display remains for six seconds after you release the buttons

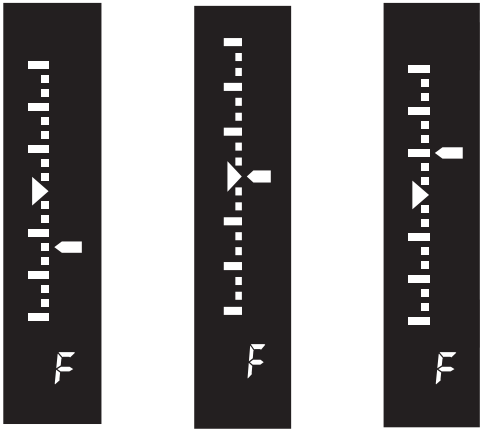


2 Turn the Main dial to set the desired bracketing amount.

The set bracketing amount is shown in the Top LCD panel as both a graphic level display and a numerical value. The diagram shows the case when setting a bracketing amount of ±1-1/3 stops.







3 When you press the Shutter button halfway and then remove your finger, the bracketing amount is displayed by the viewfinder's Exposure Level indicator.

4 Capture images according to the current drive mode.

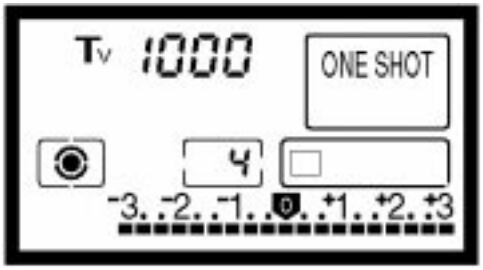
The compensated exposure value for each shot appears in the Top LCD panel as the three frames are exposed, and the AEB indicator (✳) blinks continuously until all three exposures are completed.

The compensation amount for each shot also appears in the viewfinder by the Exposure Level indicator.

It is possible to take one shot at a time even in Continuous Shooting mode. The AEB indicator (✳) blinks continuously until all three exposures are completed.

☛ If the Shutter button completely pressed in continuous exposure mode, three frames are exposed in sequence but the viewfinder's metering level indicator is not active.

☛ To capture the three frames, set Drive mode to Continuous, and hold the Shutter release until three images are captured.



5 To cancel auto exposure bracketing, repeat steps 1 and 2, resetting the bracketing amount to 0.

Auto exposure bracketing is also canceled when the lens is exchanged, Bulb Exposure mode is set, flash charge completion is loaded, the Clear button is pressed, or the Main switch is set to (L).

Custom Function F-9 (page 6-6)	The camera can be set so that auto exposure bracketing is not canceled when the lens is exchanged or the Main switch is set to (L).

By setting exposure compensation after setting the auto exposure bracketing step amount, you can take three sequential overexposed or underexposed shots while varying the compensation for each shot. The bracketing step amount is not changed even when shifting the standard (metered) exposure.

Auto exposure bracketing cannot be used in Bulb Exposure mode or when using flash.

Using Flash

There are several ways to use electronic flash with the DCS 500 Series camera. The best way for you will depend on your application. The three most popular methods are as follows:

- ✔ Using Canon EX-series Speedlites
- ✔ Using Canon EZ, EG and E-Series Speedlites
- ✔ Using non-dedicated flash equipment

The operation of each is described below.

General Information on Canon EOS Dedicated Speedlites

EX-series Speedlites, such as the 380EX and 220EX, share several common features such as E-TTL, FE Lock, and FP Flash modes. These modes provide the best overall performance and flexibility for automatic flash exposure control with the DCS 500 Series camera.

EZ-series Speedlites, such as the 540EZ, provide A-TTL, TTL, and variable-power manual flash exposure control. They are compatible with the DCS 500 Series camera, but are not as consistently accurate for automatic flash exposure control with this camera as the EX-series Speedlites.

EG-series Speedlites, such as the 480EG, are grip-style flash units. Speedlite 480EG is the most powerful Canon flash unit available for the DCS 500 Series camera. It provides TTL, External Automatic flash control, and variable-power manual operation.

E-series Speedlites, such as the 200E, are typically low-power, economy flash units with TTL-only flash operation.

Most of these units feature a built-in AF auxiliary light function that assists autofocus operation in dark situations.

- ✔ The 540EZ's AF auxiliary light is designed to work with all five of the focus points. Other Speedlites' AF auxiliary lights work only with the center focusing point.
- ✔ The 480EG does not emit an AF auxiliary light.
- ✔ The aperture values displayed on the Speedlite's LCD panel and the camera's Top LCD panel or viewfinder data display may sometimes differ. However, the exposure will be correct.
- ✔ The Speedlite's AF auxiliary light functions only in One Shot AF mode.

Using Canon EX-series Speedlites

What is E-TTL?

E-TTL stands for Evaluative Through-The-Lens flash exposure control. It is a new flash mode that reads through the lens, but not off the focal plane. This method is superior to A-TTL or TTL flash exposure control with the DCS 500 Series camera, and provides several extra features such as Flash Exposure Lock (a method of spot metering with flash) and FP flash mode (the ability to use flash at shutter speeds higher than 1/250 sec.). Utilizing a preflash fired after the Shutter button has been fully depressed but before the camera's reflex mirror goes up, E-TTL uses the camera's evaluative metering sensor to analyze and compare ambient light exposure values with illumination reflected from the subject by the preflash. This data is used to calculate and store the flash output required for optimum exposure of the main subject (identified by the AIM system), while maintaining a subtle balance between foreground and background. E-TTL is Canon's most advanced flash exposure control system to date, and requires the use of EX-series dedicated Speedlites such as the 380EX and 220EX in combination with a compatible camera such as the DCS 500 Series camera. We strongly recommend the use of an EX-series Speedlite for best results in automatic flash photography with the DCS 500 Series camera.

☞ AIM (Advanced Integrated Multi-point control system) is Canon's original multi-point autofocusing and metering system which links evaluative metering, spot metering and flash exposure control to the active focusing point. It enables the user to concentrate on composition and capture better images more easily without having to first place the subject at the center for AF lock.

How to use EX-series Speedlites for fully automatic E-TTL flash photography with the DCS 500 Series camera

1 Turn On the camera's Main switch, then turn on the flash.

2 Make sure the flash is set for Normal Sync. Please refer to the Speedlite instruction book and verify that the flash ready light is illuminated in red (indicating a full charge).

3 Make sure the EF lens is set for AF operation. (Check the focus mode switch on the lens.) This step ensures that E-TTL flash exposure control will be concentrated on the active focusing point.

☞ When the focus mode switch on the lens is set for MF or M, E-TTL flash exposure control will be averaged across the entire picture area.

4 Set the camera to Program mode (P) for fully automatic exposure.

5 Select a focusing point using the Focusing Point Selector button and Main dial, or set the camera for automatic focusing point selection (described in the next chapter) and focus the subject by pressing the Shutter button halfway down. DO NOT recompose.

6 Press the Shutter button completely to capture the image. Correct flash exposure of the subject located at the active focusing point during the exposure is assured when the flash exposure confirmation signal lights up on the EX-series Speedlite (described in the next Chapter.)

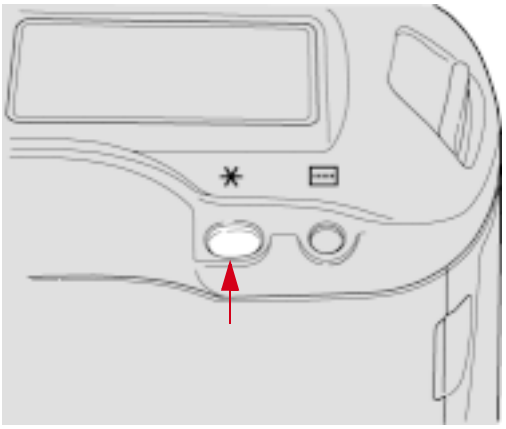
What is Flash Exposure Lock (FE Lock)?

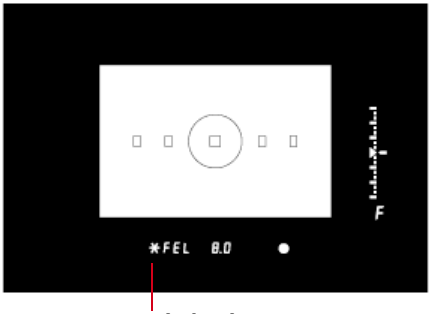
Flash Exposure Lock (FE Lock) adds AE lock and spot metering functions to flash photography with EX-series Speedlites and the DCS 500 Series camera. With FE Lock, the EX-series Speedlite's preflash fires when the camera's AE Lock button is depressed, storing metering and AF data for up to 8 seconds. This provides enough time for adjustments. Not only can the shot be recomposed, but the background exposure can also be altered for maximum creative control. FE Lock is extremely useful when you wish to recompose after focus lock or to place the main subject in a part of the picture area that is not covered by one of the focusing points. It can also eliminate potential exposure errors caused by unwanted reflections from highly reflective surfaces like windows or mirrors.

Using Flash Exposure Lock (FE Lock) with an EX-series Speedlite

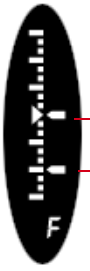
1. Turn on the camera's Main switch, then turn on the flash.
2. Verify that the flash ready light is illuminated in red (indicating a full charge).
3. Set the camera to Program mode (P) for fully automatic exposure.
4. Focus the subject by pressing the Shutter button halfway down. Keep pressing the Shutter button halfway even after focus is achieved.

5 Aim the FE Lock focusing point where you want to obtain the correct flash exposure reading, then press the FE Lock button. FEL appears briefly in the data display under the picture area, and the focusing point linked to the FE Lock flashes in red.





FE lock indicator



FE lock exposure value

Current background exposure level (This value will vary according to the light level.)

The FE Lock links to the focusing point as follows:

Choice of Focusing Points for FE Lock operation

Custom Function setting/Focusing Point selection method	CF 13-0	CF 13-1
Automatic focusing point selection	Center only	Center only
Manual focusing point selection	Center only	Selected AF frame

If you wish to link FE Lock to any focusing point other than the central one, you must select the focusing point manually while Custom Function F-13 is set to 1.

If Custom Function No. F-4 (AF activation method and AE lock button operation) is set to 1 or 2, FE Lock cannot be used.

6 Recompose if necessary and press the Shutter button completely within 8 seconds to capture the image. Correct flash exposure of the subject measured by the FE Lock is assured when the flash exposure confirmation signal lights up on the EX-series Speedlite. (Refer to the Speedlite instruction book for details.)

The proper exposure value is retained in memory—even if you release the FE Lock button—for 8 seconds or until the image is captured, or one of the camera's mode buttons is pressed, or the Speedlite or camera is turned Off, whichever comes first.

Adjusting the Background Exposure in FE Lock

After preflashing the subject with the FE Lock button, adjust the background exposure by turning the Quick Control Dial. The background exposure level is displayed on the exposure level scale in the viewfinder and on the Top LCD panel. Correct ambient exposure according to the camera's meter is indicated by the triangle index at the center of the scale.

The Quick Control dial does not adjust background exposure when the camera is set to Bulb mode, or in low light situations when the camera is set to Program or DEP.

For information on Flash Exposure Compensation (which is not the same as ambient or background exposure compensation), refer to the section on Flash Exposure Compensation later in this chapter.

What is FP Flash Mode?

FP (focal-plane) flash, or high-speed sync, enables an EX-series Speedlite to synchronize with a shutter speed faster than the camera's maximum sync speed, when used with a compatible camera like the DCS 500 Series camera. Therefore, even in bright daylight conditions, a fast lens can be used at a wide aperture to blur the background and emphasize the subject in portraiture, for example. FP flash is automatic and simple to use. It is available in Program, Shutter-priority AE, Aperture-priority AE and Manual modes (P, Tv, Av, & M). FP flash can be combined with E-TTL or FE Lock.

FP flash differs from conventional electronic flash in that its effective output (guide number) varies according to shutter speed. (In other words, the Speedlite's usable flash-to-subject distance range decreases according to shutter speed with FP flash.) Please refer to the EX-series Speedlite instruction book for details.

Using FP Flash Mode with EX-series Speedlites

1. Turn on the camera's Main switch, then turn on the flash.
2. Make sure the flash is set for FP Flash, (Please refer to the Speedlite instruction book for details) and verify that the flash ready light is illuminated in red (indicating a full charge).
3. Select the desired camera exposure mode (P, Tv, Av or M).

☞ When the EX-series Speedlite is set for FP flash mode, the EX-series Speedlite will automatically switch to FP flash mode if the user-selected or camera-selected shutter speed is faster than 1/250 sec. This condition is indicated by the letter H in the viewfinder data display below the picture area.

4. Select a focusing point using the focusing point selector button and Main dial, or set the camera for automatic focusing point selection (described in the next chapter) and focus the subject by pressing the Shutter button halfway down.
5. Press the Shutter button completely to capture the image. Correct flash exposure of the subject is assured when the flash exposure confirmation signal lights up on the EX-series Speedlite. (Refer to the Speedlite instruction book for details.)

Using Canon EZ, EG or E-Series Speedlites

What is A-TTL?

The predecessor to E-TTL, A-TTL (Advanced Through-The-Lens) flash exposure control is used with EZ-Series Speedlites. Like E-TTL, A-TTL reads through the lens and concentrates its sensitivity on the area of the picture covered by the active focusing point. Unlike E-TTL, A-TTL controls flash exposure with a dedicated sensor that reads flash illumination reflected from the focal plane during exposure. A-TTL also uses a preflash, but unlike E-TTL, the preflash is used to calculate an aperture value based on the distance that light must travel from the flash to the subject. When set for Program mode, the camera compares the distance-based aperture value to the ambient-based aperture data calculated by the camera's metering system, and selects the smaller aperture value of the two. This is designed to ensure accurate exposure of the subject in any lighting condition.

What is TTL?

TTL (Through-The-Lens) is the standard flash exposure control mode for Speedlites 480EG, 200E, 160E and Macro Ring Lite ML-3 when used with the DCS 500 Series camera. Additionally, TTL is available with Speedlite 540EZ in all camera exposure modes except for direct flash in Program mode, as shown in the following table. TTL is identical to A-TTL in almost every way, except there is no preflash. When the camera is set to Program mode, TTL flash sets an aperture based on a program line that responds to the ambient light level.

The availability of A-TTL or TTL depends on the user's choice of Speedlite, camera exposure mode, and whether or not the Speedlite is set for direct flash as follows:

Availability of A-TTL and TTL according to Speedlite with DCS 500 Series camera

Camera Exposure Mode --> Speedlite	Flash Mode	Program	Shutter-priority	Aperture-priority	Manual
540EZ	Direct Flash	A-TTL	TTL	TTL	TTL
	Bounce Flash	TTL	TTL	TTL	TTL
430EZ*	Direct Flash	A-TTL	A-TTL	A-TTL	TTL
	Bounce Flash	A-TTL	A-TTL	A-TTL	TTL
420EZ*	Direct Flash	A-TTL	A-TTL	A-TTL	TTL
	Bounce Flash	A-TTL	A-TTL	A-TTL	TTL
300EZ*	Direct Flash	A-TTL	A-TTL	A-TTL	TTL
480EG	Direct Flash	TTL	TTL	TTL	TTL
	Bounce Flash	TTL	TTL	TTL	TTL
200E	Direct Flash	TTL	TTL	TTL	TTL
160E*	Direct Flash	TTL	TTL	TTL	TTL
ML-3	Direct Flash	TTL	TTL	TTL	TTL
300TL**	Direct Flash	TTL	TTL	TTL	TTL
	Bounce Flash	TTL	TTL	TTL	TTL

*Indicates discontinued product as of 1/98.
**When using Speedlite 300TL, set the Flash Mode button to a position other than MHi or MLo for TTL automatic flash exposure.

Suitability of A-TTL and TTL for the DCS 500 Series camera

The A-TTL and TTL flash systems were originally designed for film cameras. They rely on the ability to monitor reflections from the film surface during exposure. This is a practical system for a conventional camera, because film has a relatively matte surface with reliably consistent reflection characteristics. However, digital cameras like the DCS 500 Series camera replace film with a CCD and glass cover plate which is much shinier than film. The reflection characteristics of the CCD and glass plate are inconsistent relative to film, with the result that flash exposures controlled by A-TTL and TTL tend to be erratic and are often inaccurate. Although the DCS 500 Series camera is set up to be compatible with Speedlites that feature A-TTL and TTL, we do not recommend the use of these modes with this camera because of the limitations outlined above.

If you plan on using A-TTL or TTL with the DCS 500 Series camera, you may find it necessary to use Flash Exposure Compensation for best results. The degree of compensation may vary from shot to shot, especially with direct flash. We suggest verifying the accuracy of each exposure on the built-in color LCD monitor.

Using Exposure Modes with E-TTL, A-TTL and TTL flash

The following table shows how aperture and shutter speeds are set according to the camera's shooting mode when used in E-TTL, FE Lock, FP flash, A-TTL and TTL with EOS dedicated Speedlites:

Camera Mode	**Shutter Speed**	**Aperture**
Program AE (P)	Automatically set (1/60~1/250 and up)	Automatically set
Aperture-priority AE (Av)	Automatically set (30 sec. to 1/250 and up) *	Manually set
Shutter-priority AE (Tv)	Manually set *	Automatically set
Manual (M)	Manually set *	Manually set

*The camera automatically resets the shutter to 1/250 sec. if a faster speed is set, except in FP flash mode.

Here's some additional background as to which exposure mode is best according to the situation at hand:

P (Program AE): With the camera set for fully automatic operation, the camera and Speedlite work together while you concentrate on picture-taking. In daylight or brightly lit indoor situations, the background will always be exposed correctly and the camera will control the fill-flash ratio for optimum results. Indoors or at night, the Speedlite becomes the main source of illumination and the shutter speed will automatically be kept high enough to permit hand-held exposure.

Av (Aperture-priority AE): Selecting Aperture-priority AE mode with flash gives you maximum control over depth of field when it is a concern. The camera will automatically set a shutter speed to provide adequate background exposure, day or night. Outdoors, or in relatively bright indoor lighting, if the selected aperture is unusable, the shutter speed indicators in the camera's viewfinder and Top LCD panel will blink. Just select a smaller aperture, and shoot. Indoors or at night, slow shutter speeds are likely, so it's best to use a tripod or pick a different camera exposure mode.

Tv (Shutter-priority AE): Shooting in Shutter-priority AE mode with flash lets you select the shutter speed while the camera selects the aperture to give correct background exposure. High shutter speeds up to maximum sync speed can be used in bright light, while slower speeds down to 30 seconds are more appropriate in dark conditions or for special effects. In low light situations, the maximum aperture value of the lens may blink in the viewfinder and external display if the selected shutter speed is too fast to produce a good exposure of the background. Just set a slower shutter speed and shoot, or switch to manual exposure mode on the camera.

M (Manual): Manual exposure mode lets you control both the shutter speed and aperture. This option is important in low light situations when you want to combine small apertures with high shutter speeds. Keep in mind that manual exposure mode on the camera can be combined with fully automatic flash exposure, since the camera's metering systems for flash and existing light are independently controlled.

DEP (Depth-of-Field AE): If dedicated flash is used in the DEP (Depth-of-Field AE) mode, the camera uses the same settings as dedicated flash in the P (Program AE) mode.

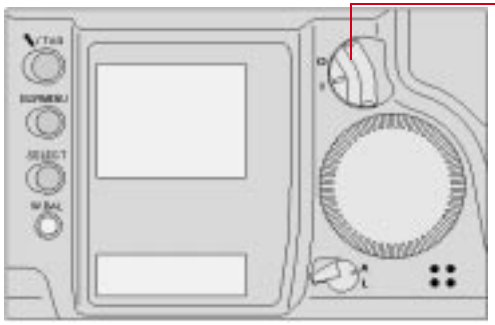
Flash Exposure Compensation

Flash exposure compensation adjusts the level of illumination provided by the flash, and is therefore an important method of creative control for all kinds of flash photography. It's particularly effective for fine-tuning the balance between foreground and background exposure during fill-in flash, but it can also be effective to compensate for extremely bright or dark tones in the subject. In the case of the DCS 500 Series camera, flash exposure compensation can also be effective to compensate for exposure errors caused by unusual reflections from the CCD and glass cover plate during A-TTL or TTL flash photography.

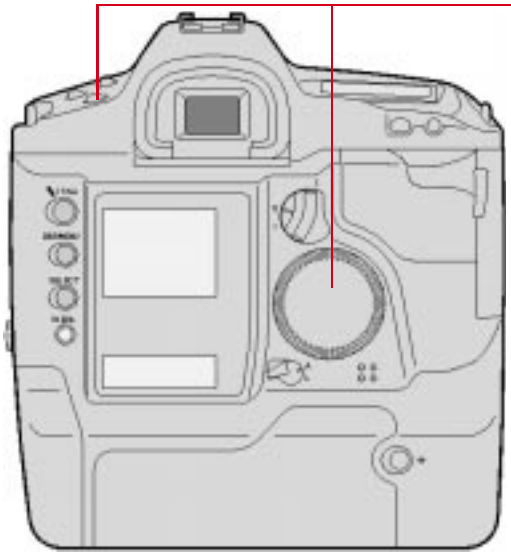
Your DCS 500 Series camera can perform flash exposure compensation in any exposure mode with all Canon EOS dedicated Speedlites. The flash exposure compensation amount can be set with the camera, or with the Speedlite in the specific case of the 540EZ and 430EZ. In either case, flash exposure compensation can be set up to +/- 3 stops in 1/3-stop increments.

☛ Flash exposure compensation set with the Speedlite remains in effect when Off-Camera Shoe Cord 2 is used, but not when Canon's modular off-camera TTL flash accessories are used. Flash exposure compensation set with the camera is effective with Canon's modular off-camera TTL flash accessories.

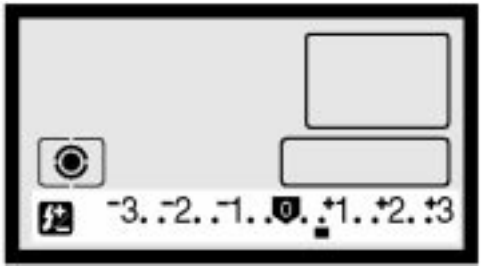
Setting Flash Exposure Compensation with the Camera



1 Set the Quick Control Dial switch to (⌊).

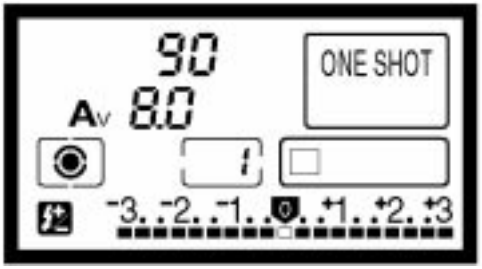


2 Press and hold the Metering Mode selector / Flash Exposure Compensation button and turn the Quick Control dial to set the desired compensation amount.



The flash exposure compensation amount is displayed in the Top LCD panel's exposure compensation display.

In the Top LCD panel, the "+" side indicates overexposure compensation, and the "–" side indicates underexposure compensation.



3 Releasing the Metering Mode selector/Flash Exposure Compensation button completes the flash exposure compensation setting. The Top LCD panel returns to its normal condition and (flash exposure compensation symbol) lights in the display to indicate that flash exposure compensation is set. The +/- symbol in the viewfinder data display also lights up when the Shutter button is pressed halfway. (The compensation amount is not displayed in either location.)

Flash exposure compensation remains set until manually canceled. To cancel, repeat step 2 to return the flash exposure compensation amount to 0.

The exposure compensation amount remains set even if the Main switch is set to (L).

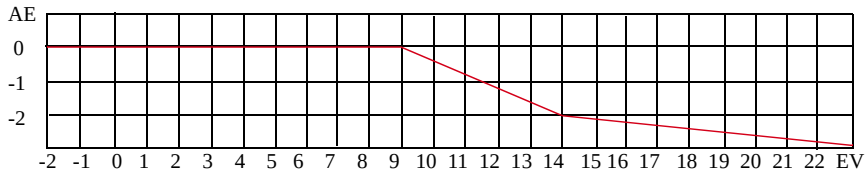
Setting Flash Exposure Compensation with the Speedlite

Please refer to the 540EZ or 430EZ instruction book for details. In this case, the flash exposure compensation amount is displayed on the Speedlite's LCD panel.

☞ Flash exposure compensation amounts other than 0 set with the Speedlite override flash exposure compensation amounts set with the camera when the Speedlite is on.

Automatic Flash Exposure Reduction

The DCS 500 Series camera has a built-in program that automatically controls flash exposure compensation based on the level of ambient light. It applies a standard flash exposure (no compensation) in dark conditions, and a reduced flash exposure level in bright conditions, as shown in the following chart:



How to read this chart: EV Level is an index of the overall brightness of the scene. Each full EV number represents a 1-stop difference in ambient light level. Higher EV numbers indicate brighter conditions and vice versa. An EV level of 15 on this chart is equivalent to a bright daylight, or sunny 16 exposure level at ISO 100. The chart shows the level of reduction (in EV steps) from a standard flash exposure, in other words an exposure created solely by illumination from the flash, based on the EV level of the scene.

Normally, any flash exposure compensation settings that you set on the camera or Speedlite will be applied in addition to, not instead of the automatic flash exposure level control formula shown above. However, your DCS 500 Series camera is equipped with a Custom Function (F-14-1) which shuts off the flash exposure level reduction algorithm, thus applying a standard flash exposure level in any lighting condition. We recommend the use of Custom Function F-14-1 for anyone who plans on applying their own flash exposure compensation settings, since it allows greater control of the results.

External Automatic Flash Exposure Control with Speedlite 480EG

Speedlite 480EG is unique among current Canon Speedlites in offering optional external automatic flash exposure control. This method does not monitor reflections from the surface of the CCD, and is therefore capable of providing reliable results. For details of operation, please consult the 480EG's instruction book.

Manual Flash Exposure with Speedlites 540EZ, 480EG, 430EZ & 420EZ

Variable-power manual (non-automatic) flash exposure control is available with Speedlites 540EZ, 480EG, 430EZ and 420EZ. This method requires the photographer to adjust flash exposure manually based on ISO, aperture and flash-to-subject distance.

In general, manual flash exposure is an excellent choice in situations where the speedlite's position relative to the subject is fixed, for example in certain kinds of portraiture. The best camera exposure modes for use with manual flash are aperture-priority and manual. Aperture-priority combined with manual flash forces the camera's shutter speed to 1/250 sec., and is therefore suitable for hand-held work in dark situations where most if not all of the exposure is supplied by the flash. Manual camera exposure allows the photographer to select both shutter speed and aperture for maximum creative control.

For details of operation, please refer to the instruction book of the Speedlite you're using.

Using Non-Dedicated Flash Equipment

Your camera's shutter can synchronize with non-dedicated portable flash units at shutter speeds up to 1/250 sec., and with most studio strobes up to 1/125 sec. Before use, fire the flash unit at various shutter speeds to make sure it synchronizes properly with the camera.

PC Terminal

Flash units equipped with a synchro cord can be used by connecting the cord to the camera's PC terminal. The PC terminal is threaded to prevent accidental disconnection when using compatible PC flash synchro cords.

The PC terminal provides only an X-sync contact and synchronizes at all shutter speeds up to 1/125 sec.

TTL automatic flash exposure control is not possible through the PC terminal.

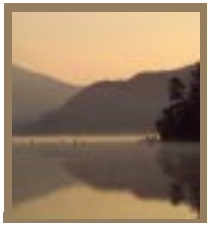
Flash units can be connected to both the PC terminal and accessory shoe for multiple flash set-ups.

☛ We recommend using Canon EOS dedicated Speedlites with this camera.

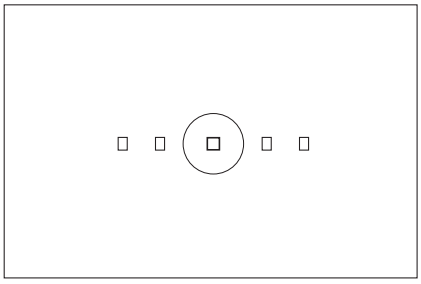
CAUTION:

Use of flash units (having two or more contacts on the hot shoe) or flash accessories that are designed for dedicated use with other brands of cameras will not work properly and may result in damage to your camera.

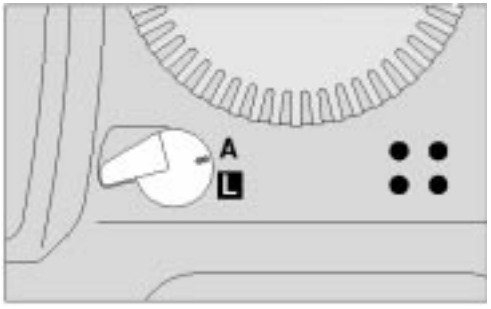
Use of flash units of other brands with a trigger circuit voltage in excess of 6 volts DC may damage your camera. Consult your service representative to confirm the compatibility.



Focusing



This camera’s wide-zone autofocus system lets you freely select from five focusing points, allowing you to keep the scene composed while concentrating on the subject.

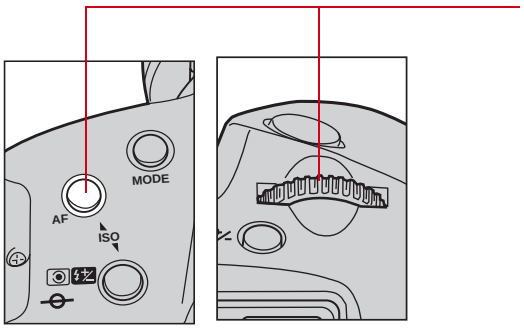


Set the camera's Main switch to (**A**).

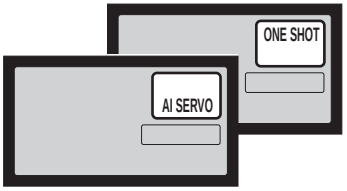
Selecting the AF Mode

Two types of autofocus are available: One-shot AF and AI Servo AF. Select the mode most appropriate for the subject and shooting situation.

☛ To use the camera's AF modes, you must set the lens' Focus Mode switch to (**AF**)

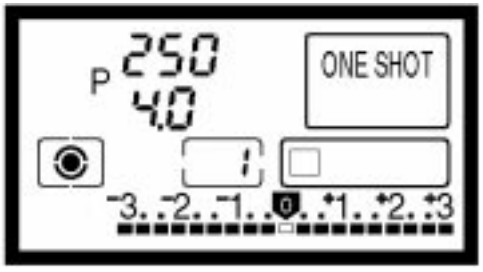


1 Press and hold the AF Mode Selector button and turn the Main dial clockwise or counter-clockwise until the desired AF mode appears in the Top LCD panel.

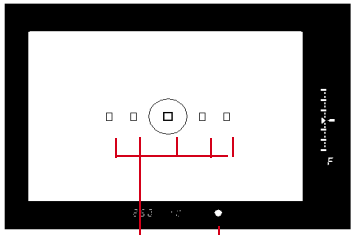


2 Release the AF Mode Selector button.

One-Shot AF



Use this mode with stationary subjects. The shutter will not release if the subject is not in focus, preventing out-of-focus shots. When the Shutter button is pressed halfway and the subject is focused, the corresponding focusing point lights red in the viewfinder, and the in-focus indicator l lights up in the viewfinder.

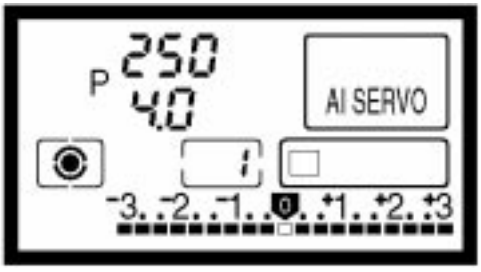


Focusing points In-focus indicator

In Evaluative Metering mode, the shutter speed and aperture value are determined at this time, and by keeping the Shutter button pressed halfway, the focus and exposure settings remain locked, allowing you to recompose the picture as desired.

☛ The shutter will not release if the in-focus indicator is blinking. Try refocusing on an alternate subject with higher contrast at approximately the same distance, or use manual focusing. (Refer to the section on “Difficult Subjects for Autofocus” later in this chapter).

AI Servo AF



Use this mode when capturing images of moving subjects. The lens focuses the subject continuously while the Shutter button is pressed halfway. AI Servo’s predictive focus control can track subjects moving toward or away from the camera. Exposure is determined immediately before the shutter is released.

In AI Servo AF mode, the viewfinder’s in-focus indicator does not light up even when the subject is in focus.

The in-focus indicator blinks if the subject cannot be focused.

Predictive Focus Control

Predictive focus continuously measures the distance and speed of a subject that is moving at a relatively constant velocity, and then predicts the subject position so that the subject will be sharply focused at the instant of exposure.

When using a manually selected focusing point, it lights red in the viewfinder. It is used for predictive focusing.

In automatic focusing point selection mode, cover the subject with the center focusing point for initial focusing. After that, even if the subject moves to a different focusing point, the camera's predictive focus function will continue to track the subject as long as it is covered by one of the focusing points. The focusing point does not light up.

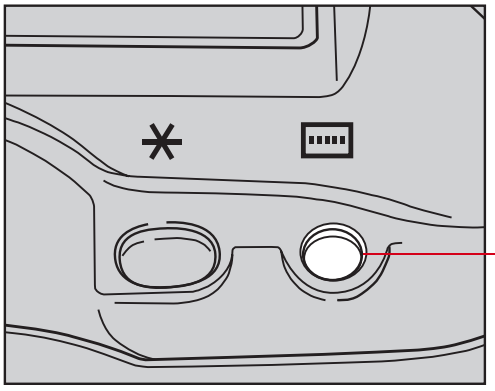
Custom Function F-4 (page 6-6)	In AI Servo AF mode with predictive focusing (used for sports photography, etc.), this function lets you momentarily lock the focus using the AE Lock button.
Custom Function F-11	In AI Servo AF mode, this function lets you select the focusing point with the Quick Control dial to manually track the moving subject.

Selecting the Five Focusing Points

Your camera incorporates a high-precision AF sensor called Multi-BASIS (Multi Base-Stored Image Sensor), equipped with five focusing points for wide autofocusing coverage.

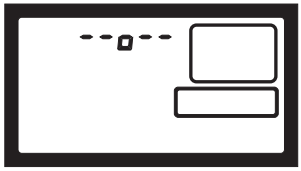
You can freely select any of the focusing points to compose the scene as desired, or you can let the camera select the focusing point for you (Automatic Focusing Selection mode).

Selecting a Focusing Point

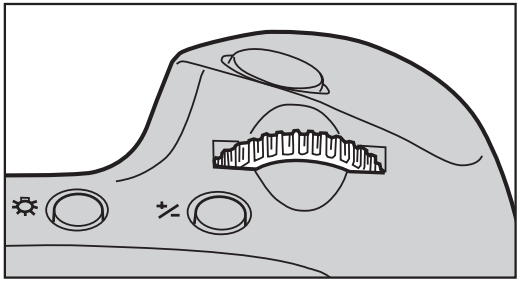


1 Press the Focusing Point Selector button.

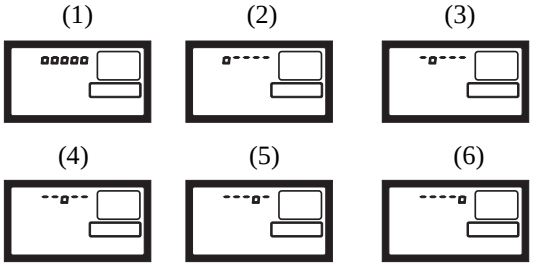
2 The currently selected focusing point lights red in the viewfinder and the Focusing Point indicator is displayed in the Top LCD panel.



All five focusing points light up in the viewfinder and Top LCD panel when the camera is set for automatic focusing point selection mode.



3 Turn the Main dial to select the desired focusing point.



The focusing points are selected in the following order:
(1) automatic focusing point selection (all five focusing points are displayed), (2) far left, (3) left center, (4) center, (5) right center, (6) far right

The selected focusing point lights red in the viewfinder and is also displayed in the Top LCD panel.

4 Press the Shutter button halfway, or allow six seconds to elapse to complete the setting.

Custom Function F-10	Prohibits superimposed focusing points in the viewfinder.
(page 6-6)	
Custom Function F-11	This function lets you select the focusing point using the Exposure Compensation button instead of the Focusing Point Selector button (·····) in combination with the Main dial, or the Quick Control dial.

Automatic Focusing Point Selection Mode

The camera automatically selects an individual focusing point after evaluating all 5 points simultaneously.

In One-shot AF mode, the system usually gives priority to the closest reliable subject.

In AI Servo AF mode, the system always gives priority to the central (cross-type) focusing point at first. (Refer to the section on “AI Servo AF” later in this chapter for more information.)

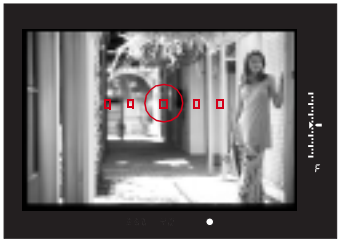
Focus Lock

When you want to compose a scene with the main subject positioned out of the zone covered by the five focusing points, follow the procedure below to first lock the focus on the subject before composing the scene and capturing the image.

☛ The focus lock function is available only in One-shot AF mode. Refer to “Selecting the AF Mode” on page 9-2.



1 Cover the subject with the selected focusing point and press the Shutter button halfway to focus the subject.



2 Keeping the shutter pressed halfway, recompose the picture as desired.

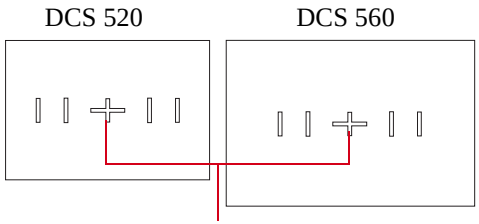
3 Press the Shutter button completely to capture the image.

☛ The exposure settings are determined when the subject is focused. If the subject brightness changes after you lock the focus, the subject may not be properly exposed.

Custom Function F-4 (page 6-6)	This custom function lets you lock the exposure with the Shutter button instead of the AE Lock button (U). Pressing the AE Lock button activates autofocusing.

Difficult Subjects for Autofocus

This camera's autofocus system can quickly focus most subjects with the high-precision Multi-BASIS (Base-Stored Image Sensor) AF sensor equipped with five focusing points as shown below. However, the system may have difficulty focusing the subjects listed below. When autofocus is impossible, the green in-focus indicator will blink in the viewfinder.



Position of individual sensor of BASIS

Typical low-contrast subject



Low contrast subjects (misty scenes, light-colored or white objects)

Subjects in extremely low-light situations (a dark room, night scenes)

Subjects in extremely strong backlight, or with bright spectral reflections (shiny metal, snow, ice, surface of a lake)

Subjects with an object in front of them (caged zoo animals)

Subjects having generally horizontal patterns (only when using the center focusing point, when using lenses with maximum aperture smaller than f/2.8)

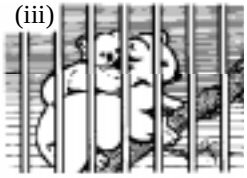
Subjects having generally vertical patterns (only when using focusing points other than the center)

Focus these difficult subjects as follows:

Low-light situation
(ii)



Subjects with objects in front of them
(iii)



1 Make the following adjustments, as needed.

With low contrast subjects, focus on a substitute subject at the same distance from the camera as your main subject, then recompose the picture using the focus lock function.

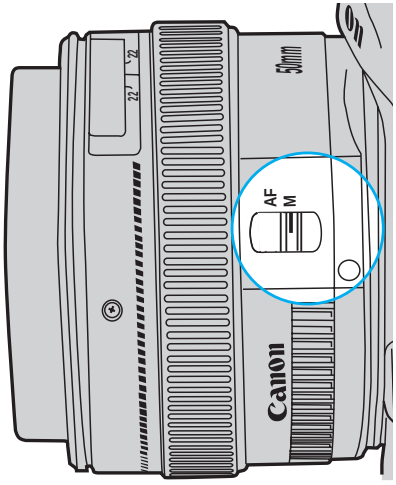
With horizontal patterns, there is no problem when using a lens with a maximum aperture of f/2.8 or larger (except the EF50mm f/2.5 Compact Macro or EF28-80mm f/2.8-4L) because the camera's central cross-sensor activates to detect horizontal lines. When using a lens with a maximum aperture smaller than f/2.8, use the focusing points other than the center as these have vertical sensors. Focus the subject, then recompose the picture using the focus lock function.

With vertical patterns, use the center focusing point which has a horizontal sensor, focus the subject, then recompose the picture using the focus lock function.

2 Set the lens' Focus Mode switch to (**M**) and manually focus the subject. (Refer to the section on "Manual Focusing" on the next page for more information.)

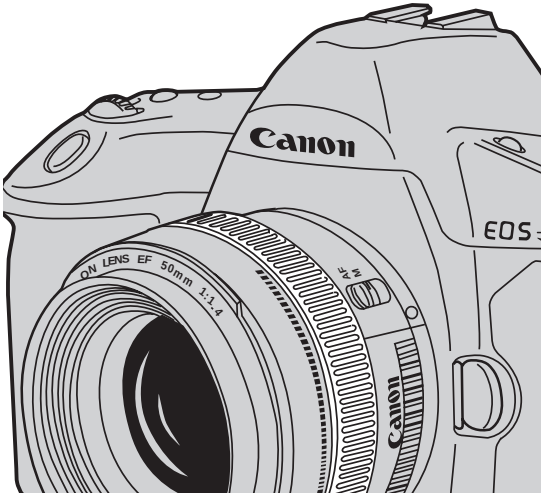
Manual Focusing

Use manual focusing when the subject is difficult to focus with the camera's autofocus system, or when you need to control the focus for alternative focus effects.



1 Set the lens' Focus Mode switch to (**M**).

The AF mode display is extinguished in the Top LCD panel.



2 Hold the Shutter button halfway down and look through the viewfinder. Turn the lens' manual focusing ring until the subject appears sharp.

*When the focus mode is switched from (**AF**) to (**M**), the focusing point and in-focus indicator in the viewfinder light when the subject is in focus.*

Full-time Manual Focusing with USM Lenses

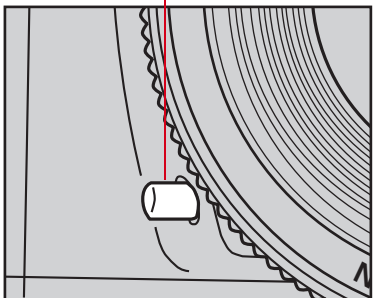
USM (Ultrasonic Motor) lenses are equipped with a full-time manual focusing function that lets you manually adjust the focus after autofocusing is completed to achieve the desired effect. Use this function in One-shot AF mode.

☛ This method of focus adjustment cannot be used if your USM lens does not have a distance scale.

Custom Function F-7 (page 6-6)	When using a USM lens equipped with an electronic manual focusing system, setting this custom function will allow manual focusing only when the lens' Focus Mode switch is set to (**M**).

Checking the Depth of Field

Depth of field is the range of focus in front of and behind the subject in which objects appear sharp. The depth of field varies from shallow to deep depending on the aperture setting, the angle of view of the lens in use and the camera to subject distance.



Press the Depth-of-field Preview button to check the depth of field before capturing an image.

The camera will close down the lens' diaphragm to the shooting aperture, allowing you to see the range of sharpness in the viewfinder.

Exposure setting is locked when the Depth-of-field Preview button is pressed.

The autofocus operation does not function while The Depth-of-field Preview button is pressed.

Anti-aliasing Filter: Effect on Focus

The anti-aliasing filter causes the distance indicator on your lens to show that an object is closer than it actually is. This is particularly true when you use a wide angle lens. It also slightly increases the minimum distance at which you can focus.

☞ The anti-aliasing filter does not affect focusing, either manual or automatic.

Sharpening

Your camera is equipped with an anti-aliasing filter, an optical filter mounted inside the camera in front of the electronic imager. This filter improves overall image quality at the expense of a small loss of sharpness in the image. In general, you will want to sharpen images when the anti-aliasing filter is installed. There may be special situations where you will not want to sharpen, or where you want to remove the anti-aliasing filter.

When you use the DCS Host software with your DCS camera, you can specify whether you want the image sharpened. To use the Sharpening feature, you may need to change settings on both your camera and in the DCS Host software.

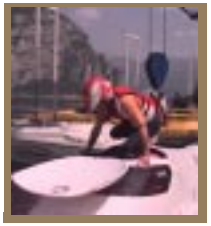
The anti-aliasing filter uses optical design to reduce or eliminate the high-frequency image patterning problems associated with single-shot digital capture and interpolation. The optical effect causes a small change in how lenses perform compared to cameras without the filter installed. The auto-focus capability adapts to the presence of the anti-aliasing filter and will compensate for any variations under normal use.

If you choose Manual focus, be advised that zoom lenses experiences a shift in the focus point as the focal length of the zoom is changed. If you zoom into your subject matter for close focus, then zoom out to compose your image, the focus point will change. This is easily remedied by only focusing at the zoom setting used to capture the image, or reverting to auto-focus and allowing the focusing computer to accommodate the anti-aliasing filter's optical effect.

Preparing for Sharpening in the DCS Host software

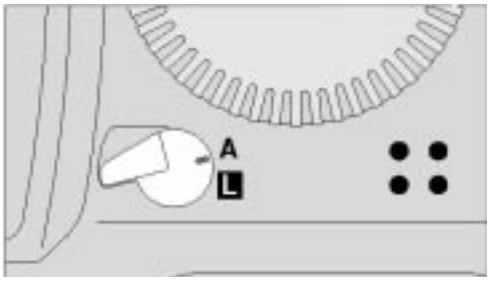
You can set a camera property that tells the DCS Host software whether sharpening should be applied. Refer to "Enabling Sharpening" on page 6-23.

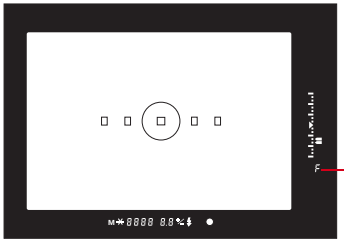
For information on the Sharpening function, refer to the KODAK PROFESSIONAL DCS Host Software User's Manual on the DCS Host Software CD included with your camera.



Capturing Images

This section describes the steps involved with capturing an image.





1 Set the camera's Main switch to (**A**).

2 Look through the viewfinder eyepiece and frame the scene within the inner rectangle of the focusing screen.

The focusing screen in the camera provides a view of the scene matching the size of the image that will be recorded on the imager.

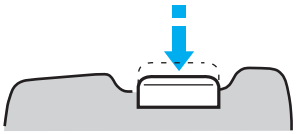
If the "F" appears at the right of the focusing screen, you are ready to shoot. If it does not appear, your camera may be busy saving images, (indicated by a blinking Card icon on the Back LCD panel), or there may be no PC Card, a full PC Card, or a low battery.

3 Press the Shutter button to capture an image.

Shutter Button Operation and Autofocus

The Shutter button has a two step construction. Press halfway (to the first step) to activate focusing and metering, and press completely (to the second step) to release the shutter and make the exposure.

Pressing the Shutter Button Halfway





In-focus indicator

1. Press the Shutter button halfway to activate autofocus. When the subject is focused, the corresponding focusing point momentarily lights red. (The green In-focus indicator lights up in the viewfinder in One-shot AF mode).

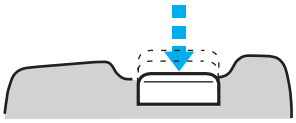
   The autofocus system uses five focusing points.

   The focusing point does not light up in Automatic Focus Point Selection mode when the AF mode is set to AI Servo.

   The In-focus indicator does not light up in AI Servo AF mode.

2. At the same time, the camera determines the shutter speed and aperture value combination (exposure value), and the results are displayed in the Top LCD panel and viewfinder. If you remove your finger from the Shutter button, a timer operates to continuously display the exposure settings for six seconds.

Pressing the Shutter Button Completely



Press the Shutter button completely to release the Shutter and capture an image.

The Back LCD panel's frame counter displays the frame number.

☛ Viewfinder data turns off during exposure.

If the camera moves at the instant the Shutter button is released, the motion during exposure may cause an unsharp picture. This occurrence, called "camera shake," can be prevented by following these guidelines:

1. Hold the camera with your right hand and the lens with your left hand (firmly) so that they do not move when you capture the image.
2. Gently press the Shutter button from the halfway position to the fully-pressed position with the fat part of your index finger. The trick to keeping the camera still when capturing an image is to press the Shutter button by gently squeezing the camera with your right hand.

Changing the Drive Mode

There are two drive modes: single exposure mode (▭) and continuous exposure mode (▭▭).

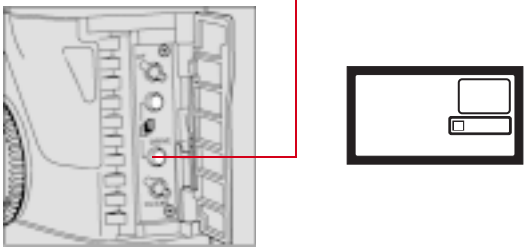
Single Exposure

In single exposure mode, one image is captured each time you press the Shutter button. After capturing an image, return the Shutter button to the half-pressed position to prepare for the next exposure while keeping the exposure value locked (possible only when the camera is set to One-shot AF and Evaluative Metering modes).

Continuous Exposure

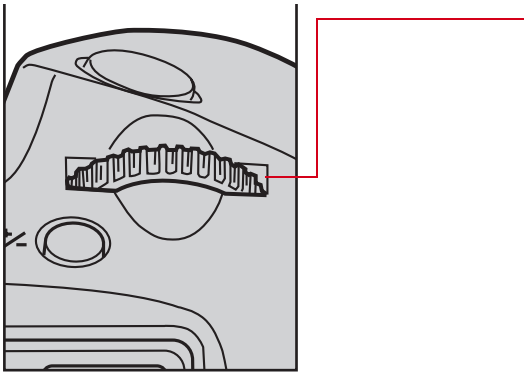
In continuous exposure mode, images are captured continuously at the following rates:

DCS 520	3.5 frames/sec. If memory is full—burst depth is of 12 reached—the rate is temporarily reduced to .5 frame/sec. (1 frame/2 sec.)
DCS 560	1 frame/sec. If the memory is full—burst depth of 3 is reached—the rate is temporarily reduced to .15 frame/sec. (1 frame/7 sec.)



1 Open the palm door and press the Drive Mode Selector button.

The current drive mode is displayed in the Top LCD panel for approximately six seconds after you release the selector.



2 Turn the Main dial until the desired drive mode is displayed in the Top LCD panel.

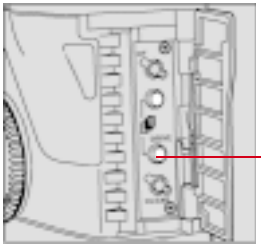
3 To complete the setting, press the Shutter button halfway or wait until the six-second timer elapses.

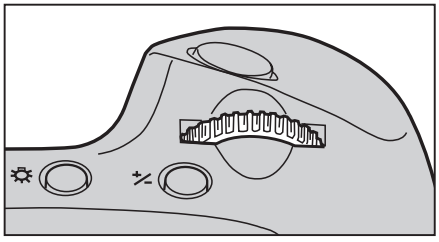
Maximum Continuous Shooting Speed in Different AF Modes

	One-shot/Manual	AI Servo
DCS 520	Approximately 3.5 frames/second	Approximately 3.5 frames/second
DCS 560	1 frame/second	1 frame/second

Using the Self-timer

Two built-in Self-timer modes let you delay the exposure 10 seconds or 2 seconds from the time you press the Shutter button. When using the Self-timer ( ) place the camera on a tripod or a steady surface.





1 Open the Palm door and press the Drive Mode Selector button.

The current frame advance mode is displayed in the Top LCD panel for approximately 6 seconds.



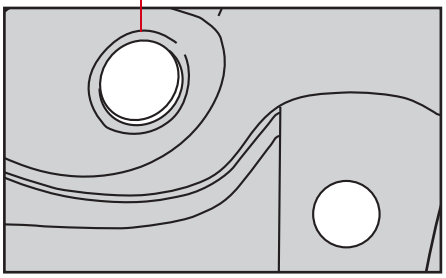
2 Turn the Main dial until the desired Self-timer mode appears in the Top LCD panel.

^{10}: 10-second timer

$_{2}$: 2-second timer

Use the 10-second self-timer when capturing an image of a group of people or a scene that you want to be a part of, and use the 2-second self-timer when you want to minimize camera-shake (camera vibration induced when the Shutter button is pressed) while capturing close-up images or duplicate images.

3 Looking into the viewfinder, compose the picture and press the Shutter button halfway to focus the subject and set the exposure.



4 Press the Shutter button completely. The Self-timer lamp blinks to indicate that the Self-timer function is operating. The lamp starts blinking faster two seconds before the picture is taken.

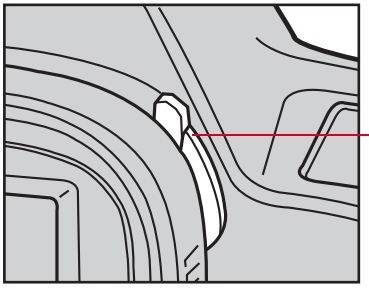
To cancel the self-timer in mid-operation, set the Main switch to (L).

IMPORTANT:

Be careful to not stand in front of the lens when pressing the Shutter button, as this will cause the camera to misfocus.

Using the Eyepiece Shutter

To prevent metering errors caused by light entering the eyepiece when pressing the Shutter button with your eye away from the viewfinder, close the eyepiece shutter before pressing the Shutter button. Recommended when using the self-timer or making long time exposures.

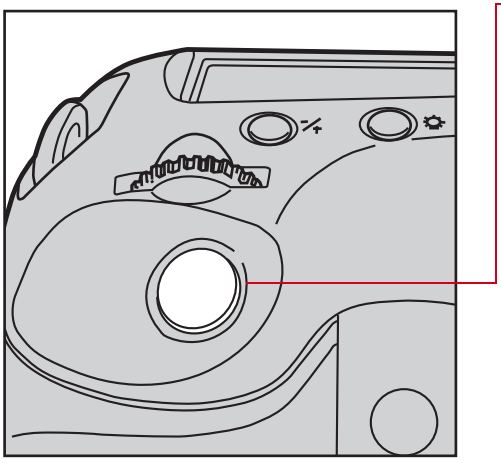


Push the Eyepiece Shutter lever to the right to close the eyepiece shutter. Push the lever in the opposite direction to open.

Locking the Mirror Up

Setting custom function F-12 (page 6) lets you swing the mirror up before opening the shutter and starting the exposure. This eliminates the slight vibration caused by mirror shock, ensuring maximum sharpness when taking close-up photos or using super-telephoto lenses.

For best results with mirror-up shooting, use a Remote Switch RS-80N3 (available from Canon).



1 Press the Shutter button all the way to swing the mirror up.

The mirror will stay up for 30 seconds. If there is no camera operation within 30 seconds, the mirror will automatically return to its normal position without capturing an image. Pressing the Shutter button again will return the mirror to the raised position.

2 Momentarily let up on the Shutter button, then press it again completely to capture the image. The mirror returns to its normal position after the exposure is completed.

CAUTION: ⚠

When shooting outdoors on a sunny day or in a bright location such as a ski slope or a sea shore, capture the image within 30 seconds after swinging the mirror up to avoid burning the Shutter curtain.

Do not point the camera lens at direct sunlight when the mirror is in the up position to avoid burning the Shutter curtain.

When the mirror-up function is set, one image is exposed at a time, regardless of the Drive mode (Single Exposure or Continuous Exposure).

If the Self-timer is used in combination with the mirror-up function, the mirror swings up when the Shutter button is first pressed, then the Shutter releases automatically after a delay of 10 seconds (in 10-second Self-timer mode) or 2 seconds (in 2-second Self-timer mode).

When using the Bulb Exposure and Self-timer modes in combination with the mirror-up function, a shutter release-type sound is heard when you remove your finger from the Shutter button while the Self-timer is operating, but no image is actually captured.

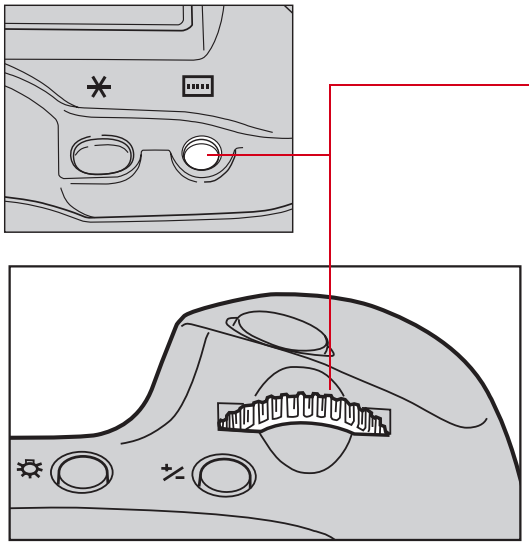
Using the Vertical Controls

Your camera has been designed to facilitate capturing images in a vertical orientation. The special vertical controls will make it unnecessary for you to twist your body or hold your arm in an uncomfortable position.



1. Starting with the camera in the normal position for capturing images, turn it 90 degrees in a counter clockwise direction.
2. Slide the Vertical Control switch so that the red dot shows.

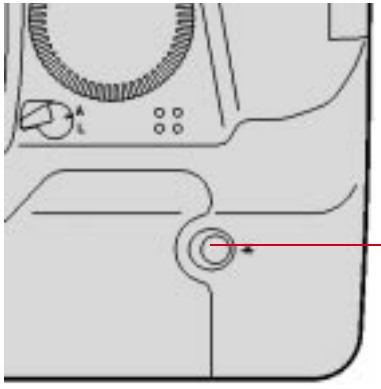
   This activates the Vertical Shutter Release.



3 (Optional) To lock in exposure, follow these steps.

a Focus the subject by holding down the Focusing Point Selector button and turning the Main dial.

The currently selected focusing point lights red in the viewfinder and the focusing point indicator appears in the Top LCD panel.

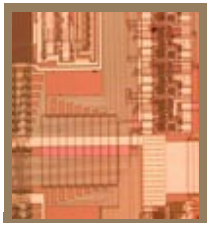


b Press the Vertical AE Lock button.

c Refocus the subject and change the composition as desired.



4 Press the Vertical Shutter button to capture an image.



Working with Images on the Camera

Your camera's Image Display allows you to view images and information about images stored on the PC Card. You can adjust the display contrast for a better view of the images. In addition, you can record sound files to be associated with images, and delete images to free up space on the PC Card.

Image Review Mode

There are three modes available for viewing images on the Image Display: Single, Four, and Nine Image Review mode.

Single Image Review mode



Four Image Review mode



Nine Image Review mode



Setting the Review Mode

1. Insert a PC Card. Refer to “Inserting/Removing PC Cards” on page 4-3.
2. Press the DISP/MENU button to turn the Image Display on.
3. Select the Display icon, then select Single, Four, or Nine image Review mode. Refer to “Navigation Techniques” on page 2-11.

   One, four, or nine images will appear.

Reviewing Images

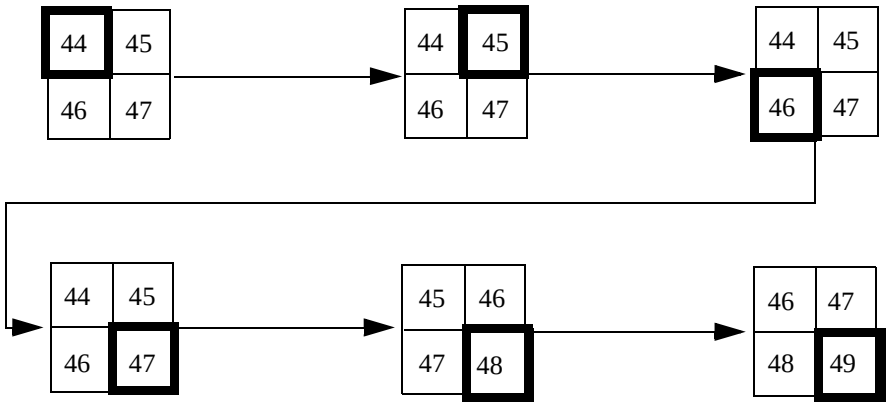
You can review any images that have been stored on the PC Card, a folder at a time. (Only the images in the currently selected folder are available for display at any one time.)

1. Press the DISP/MENU button to turn on the Image Display.
2. Select the Folder icon.

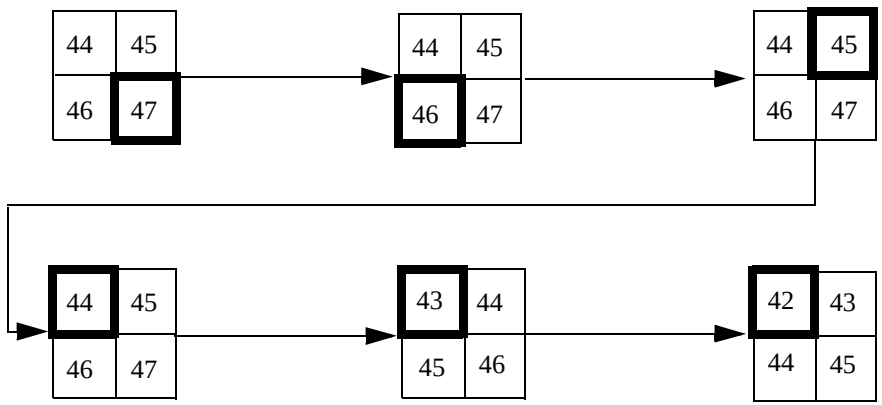
   The Folder screen appears. A • is displayed next to the currently selected folder.
3. Select a folder.
4. Select Single, Four, or Nine Image Review mode.
5. Adjust the contrast, if needed (page 11-4).
6. Press and hold the SELECT button and turn the Quick Control dial clockwise or counter-clockwise to scroll through the images.

The following are examples of clockwise and counter-clockwise rotation of the Main dial in four image display mode. You can navigate from lower to higher images in the folder by rotating the Main dial clockwise, and from higher to lower images in the folder by rotating the Main dial counter-clockwise.

Clockwise Rotation of Main dial



Counter-clockwise Rotation of Main dial

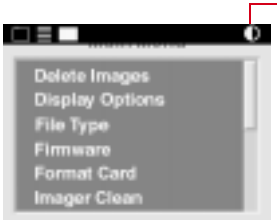


Adjusting Display Contrast

Using the Contrast slider, you can change the contrast to lighten or darken the images on the Image Display.

☛ Changing contrast does not affect the stored images, only the view of the images on the Image Display.

If you change the contrast setting, the change will be maintained during Powersave and when you turn the camera off.



1 Select the Contrast icon (page 2-11).



A gray scale bar is displayed at the side of the image and a slider is displayed across the top.

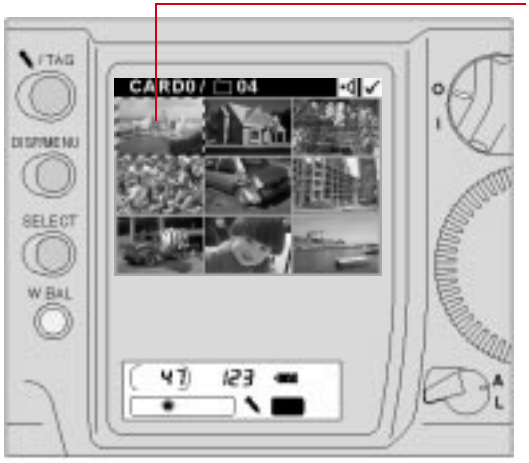
2 Press and hold the SELECT button and rotate the Quick Control dial clockwise or counter-clockwise to move the slider until the desired contrast is achieved.

The displayed image changes to reflect the contrast change as does the gray scale bar.

☛ With proper contrast, the gray scale bar runs from black to white, with clearly defined steps in between.

Selecting an Image

You need to select an image if you want to tag it and record a sound file or specify that it not be deleted, as described in the next few sections. When you capture an image, that image is automatically selected. If you need a different image, you need to select it.



1. Review the images until the selection rectangle is displayed over the image that you wish to select.
2. Release the SELECT button.

Setting Display Options

You can specify that areas of overexposure are highlighted. In addition, you can specify that the exposure histogram and information about the image be displayed. (The histogram is only displayed in Single Image Review mode.)

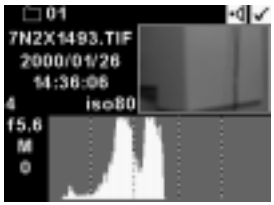


1. Select the Menu icon then choose Main menu from the dropdown menu (page 2-11).
2. Select Display Options from the Main menu.

   The Display Options screen appears. A checkmark next to an option indicates that the option is on.
3. Press and hold the SELECT button and rotate the Quick Control dial to turn an option on or off.

   If you turned Highlighting on, any overexposed areas of the image blink.

☞ This is not necessarily a bad thing. The highlighting indicates areas where the pixel code values exceed 255.



If you turned the Histogram/Info option on, the Histogram and exposure info appear.

The image histogram shows the range and distribution of tonal values for an image. The histogram displays the number of occurrences of each pixel code value, and can be used to assess an image's brightness and contrast levels. Pixel code values represent the relative value of light intensities in a scene. They range from 0 (darkest elements in a scene) to 255 (brightest elements in a scene). For a high contrast image, the histogram will include almost the entire range of pixel code values. For a low contrast image, the histogram will include a small range of pixel code values.

The info will not be displayed in Four or Nine Image Review mode.

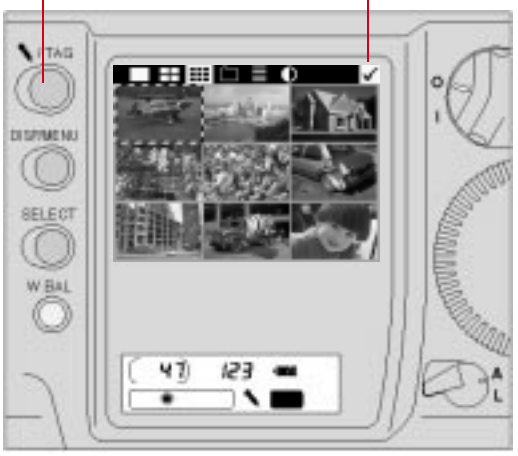
To temporarily toggle the display of the Histogram press and release the SELECT button.

To temporarily stop the blinking of highlights, press and hold the SELECT button.

Tagging Images

You can tag one or more images that you do not want to delete. Refer to the next section.

☞ Images that you tag using the camera retain their tag when opened in the Kodak software. Tagged or untagged images can then be selected for copying, deleting, acquiring, etc. Refer to the Kodak Professional DCS Host Software User's manual for more information.



1. Select an image.
2. Quickly press and release the RECORD/TAG button.

☞ Do not hold the RECORD/TAG button for more than one second or you will activate the microphone used for attaching sound files to images.

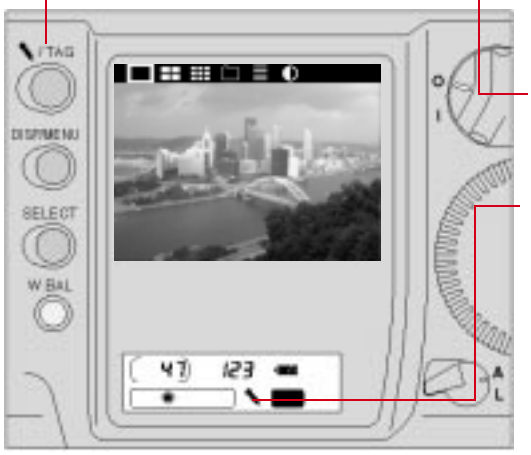
A Tag icon is displayed at the top right of the Menu Bar.

You can also tag the last image captured until you perform another operation or the camera enters PowerSave mode. This is true whether the Image Display is On or Off, and regardless of the current review mode. Simply press and release the RECORD/TAG button.

An image will retain its tag when you open it in the DCS Host software where you can select tagged or untagged images and perform a variety of operations.

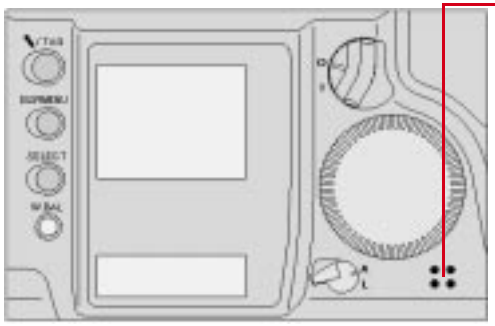
Associating Sound Files With Images

You can attach a sound file to the current image, either immediately after you capture the image, or later when you review it. If, using the DCS Host software, you later copy the image to your computer or delete the image, the sound file will also be copied or deleted. (If you copy or delete images without using the DCS Host software, you must also copy or delete the sound (.WAV) files. Refer to the KODAK PROFESSIONAL DCS Host Software User's manual on the CD included with your camera.



1. Capture an image or select the image to which you wish to attach a sound file.
2. Press and hold the RECORD/TAG button for more than one second.

   A Microphone icon is displayed in the Back LCD panel. This indicates that you can begin recording.



3. Speak into the microphone while continuing to press the RECORD/TAG button.
4. Release the RECORD/TAG button.

   The recording stops and the Microphone icon goes away.



A Sound icon is displayed at the right of the menu bar, indicating that the selected image has an associated sound file.

You will not be able to record sounds and the Microphone icon will not be displayed in the Back LCD panel under the following circumstances:

- ✔ No image in the current folder
- ✔ You are using the DCS Host software in Test Shot mode. (Refer to the KODAK PROFESSIONAL DCS Host Software User's manual on the CD included with your camera.)

Deleting Images

You can delete one or more images from the PC Card to make space for additional images. If there are one or more sound files associated with an image, they too will be deleted.

Deleting a Single Image



1. Press and hold the DISP/MENU button and the SELECT button at the same time.

   If the Image Display is off, it turns on.

   The Delete Image screen appears, showing the selected image.

2. Press and hold the SELECT button and rotate the Quick Control dial to highlight Yes, No, or Done.

Choice	Result
Yes	The image is deleted and the next image is displayed
No	The image is not deleted and the next image is displayed
Done	The image is not deleted and the screen goes away

Deleting More Than One Image

You can delete all images in a folder, all untagged images in a folder, all images on a PC Card, or all untagged images on a PC Card.

1. Select a PC Card, if necessary.
2. To delete all untagged images in a folder or on a card, tag any images that you DO NOT want to delete. Refer to “Tagging Images” on page 11-8.
3. Select the Menu icon, then choose Main Menu from the dropdown menu.
4. Select Delete Images from the Main menu.

   The Delete Images screen appears.



5. Select your choice.

   A confirmation screen appears.



6. Select Yes or No.

   If you chose Yes, the images that you specified are deleted. (If you chose one of the tagged image options, images that you tagged are NOT deleted.)

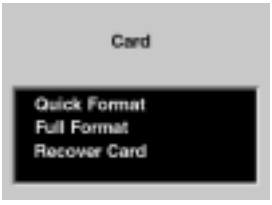
IMPORTANT:

When you delete all images or all untagged images on a card, images in other folders are also deleted. Be certain that you don’t need any of them.

Recovering Deleted Images

You can recover images that were previously deleted from a PC Card, if they have not been overwritten. Only images that were written to a PC Card by a DCS 500 Series camera can be recovered.

For the Recover function to work, the PC Card must have been formatted on the camera. (The Recover function will not work for a card “out of the box” or formatted using the DCS Host software.)



1 Select the Menu icon, then choose Main Menu.

2 Choose Card from the Main menu.

The Card menu appears.

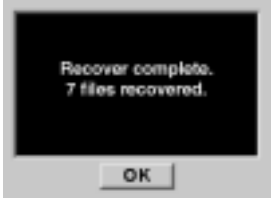
3 Choose Recover Card.



A confirmation screen appears. A Recover folder is created on the PC Card when you recover images.

4 Click OK.

☞ You cannot capture images to the Recover folder.



A recovery complete screen appears, telling you how many files were recovered.

5 Click OK.

6 Copy images from the PC Card and format the card before using it to capture more images.



Connecting to Your Computer

There are two ways to access camera images from your computer:

- ✔ Connect the camera to the computer using IEEE 1394 connections then access the images using the Kodak software.
- ✔ Remove the PC Card from the camera, insert it into a PC Card reader in your computer, then access the images using the Kodak software.

☞ Refer to the KODAK PROFESSIONAL DCS Host Software User's Manual on the CD included with your camera. You can open the manual using Adobe Acrobat Reader which is included on the CD.

Advantages to using an IEEE 1394 Connection

- ✔ You can capture images, then view them on your computer within seconds.
- ✔ You can update the firmware on your camera from your computer.

Advantages to using a Card Reader

- ✔ You do not need a camera present while you are accessing images. (Someone else can be using the camera while you work with the images.)
- ✔ Today's Notebook PCs don't have 1394 connections but they do have PC Card readers.

Connecting Your Camera to the Computer

You will connect your camera to the computer using IEEE 1394 cable. This cable moves images from the camera to the computer at a very rapid rate. It is easy to use—you can plug either end into the camera or the computer, and you don't need to turn the computer or the camera off before connecting or disconnecting.

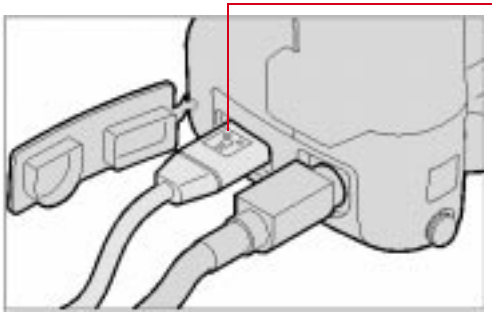
☞ You must use an IEEE 1394 connector and/or adapter cards

To Connect to the Computer

1 Charge and insert the battery or hook up the AC adapter. (Refer to Chapter 3 for more information.)

While it is not necessary to use the adapter, it is highly recommended as insurance against possible loss of data if the battery should lose its charge.

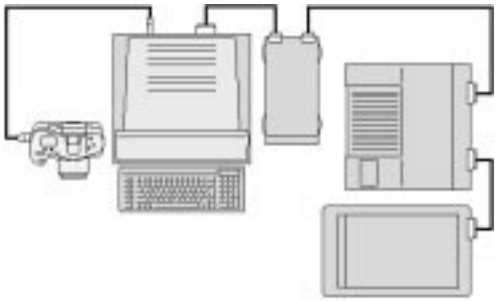
2 Install the DCS Host software for Macintosh or PC. if you have not already done so. Refer to the Kodak Professional DCS Host Software User's manual (on your software CD) for more information.



3 Connect either end of the IEEE 1394 cable into the camera port.

4 Connect the other end of the cable into any available port on the IEEE 1394 adapter card on your computer.

The adapter card may have multiple ports.



- You may connect more than one camera or other 1394 devices to the card as long as you avoid a closed loop configuration. (The drawing indicates an acceptable configuration.)
- The camera's IEEE 1394 port does not support a second pass-through connector, and is meant to be the last device on the "daisy chain."

You are now ready to access your camera from the computer.

Quitting—Disconnecting from the Computer

Complete these steps when you have completed your work with the camera and the computer.

CAUTION: ⚠

Do not disconnect the camera from the computer while the DCS Host Software is running. Doing so may result in the loss of data from the PC Card. Be sure to exit the software before disconnecting from the computer.

☞ You can connect or disconnect the camera without turning the camera or the computer off.

1 If the DCS Host Software is running, click the Done button from the Image window.

2 Disconnect the camera from the computer.

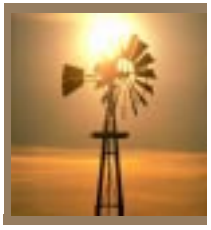
Using the Card Reader

If your computer has a card reader, you can access images by placing a PC Card containing camera images in the reader. If you have a new card reader, install it using the instructions accompanying the reader.

1 Remove the PC Card from your camera (page 4-3).

2 Insert the PC Card into the card reader on your computer.

☞ If your card reader is attached to a PC running NT 4.0, you may need to reboot your system each time that you insert a PC Card into the reader.

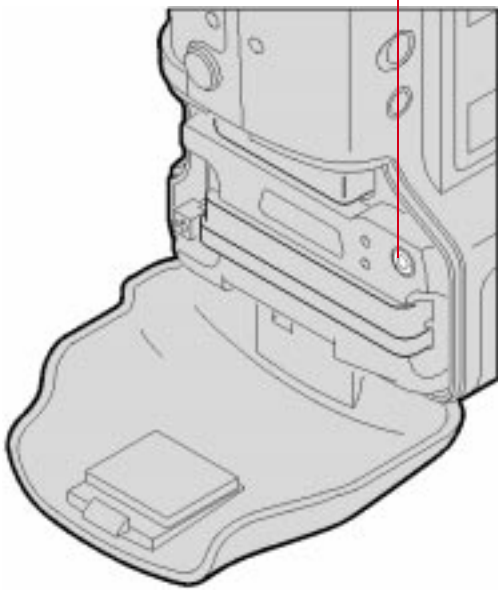


Transmitting Data

You can use the serial port on your camera to transfer data between your camera and other devices. In addition, there is a purchasable option that enables you to transmit images to a remote location using a cellular phone.

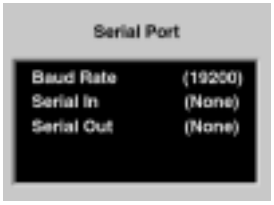
Connecting a Device to the Serial Port

You can connect a variety of devices to your camera's serial port using a serial cable (available from your dealer of KODAK products). Devices used to transmit text strings must be RS-232 compliant.



1. Connect the appropriate end of the serial cable to the serial port on your camera.
2. Connect the other end of the cable to the device.

Accessing Serial Port Options

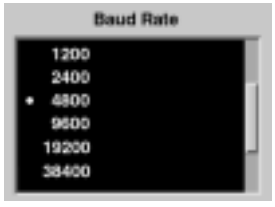


1. Select the Menu icon, then choose Main Menu from the dropdown menu (page 2-11).
2. Select Serial Port from the Main menu.

   The Serial Port menu appears.
3. Select one of the following:
   - ✔ Baud Rate (page 13-2)
   - ✔ Serial In (page 13-3)
   - ✔ Serial Out (page 13-5)

Setting the Baud Rate

Before transmitting data between the camera and a connected device, you must set the correct baud rate required by the device. Choose from 300, 600, 1200, 2400, 4800, 9600, 19200, 38400, 57600, and 115200.



1. Select Baud Rate from the Serial Port menu (page 13-2).

   The Baud Rate menu appears.
2. Select the appropriate baud rate for the connected device.

   The setting is retained until you change it, or Modem is selected as the Serial In or Serial Out mode. When Modem is selected, baud rate is automatically set to 19200.

Serial In Mode

Using Serial In mode, your camera accepts text strings from a connected external device. The information is then added to specified image headers.

☛ Serial In and Serial Out modes can work at the same time.



1. Select Serial In from the Serial Port menu (page 13-2).

   The Serial In Mode menu appears.

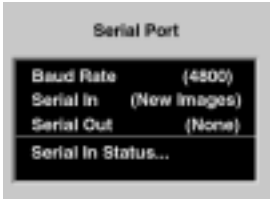
2. Select your choice (described in the table below).

   The setting is retained until you change it, disconnect the device, or use the Transmit option. Modem is selected automatically with this option.

Menu Choice	Action	Comments
None	No data transmitted	Serial port is unavailable.
New Images	The text string from the connected device is written to the header of subsequent images.	Text string must be 250 valid characters, or less. Valid characters consist of ASCII characters, carriage return, and line termination. When you select New Images or Previous Image, a Serial In Status option (page 13-4) becomes available.
Previous Image	A text string from the connected device is written to the header of previously captured image.	
GPS	A text string from the connected GPS device is written to the header of the just-captured image.	If a Trimble GPS card is inserted in the camera, the serial port GPS functionality is over-ridden by the Trimble card.
Remote Release	An image is captured when you activate the connected remote cable release.	Use the remote release to minimize camera movement or when you are away from the camera.
Modem	Reserved for Transmit option (page 13-6)	Set automatically when you use the Transmit option.

Serial In Status

When you select New Images or Previous Image from the Serial In Mode menu, the Serial In Status choice becomes available.



Select Serial in Status from the Serial Port menu.



If the connected device is sending data, a message indicates the most recent data received.

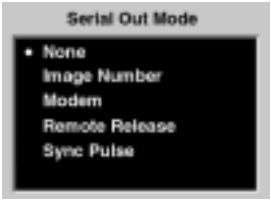


If there is no device connected or if a connected device is not currently sending data, this message appears.

Serial Out Mode

Using Serial Out mode, your camera sends data to a remotely connected device.

☛ Serial In and Serial Out modes can work at the same time.



1 Select Serial Out from the Serial Port menu (page 13-2).

The Serial Out Mode menu appears.

2 Select your choice (described in the table below).

The setting is retained until you change it, or use the Transmit option (page 13-6). Modem is selected automatically with this option.

Menu Choice	Action	Comments
None	No data transmitted	
Image Number	A text string containing the image number of the just-captured image is sent to the connected device.	
Modem	Reserved for Transmit option (page 13-6)	
Remote Release		Remote Release is automatically selected when you select Remote Release in the Serial In menu.
Sync Pulse	A +3Vdc signal with a duration identical to the exposure duration is sent to the connected device.	

Image Transmit

You can transmit images from your camera to a remote computer using a cell phone. The DCS Transmission kit (available from your dealer of Kodak products) includes hardware and documentation to be used when you connect your camera to a cell phone. It also contains a certificate containing information that you must use to acquire a special firmware key.

When you load firmware version 3.2 or later into your camera, you can activate the Transmit option by loading the firmware key.



Camera Care

Handling

With careful handling, your camera should produce images of the highest quality for years to come.

CAUTION:

Be careful not to drop the camera or subject it to shock. (While it has been designed for durability, it is a precision instrument and should be handled with care.)

Keep it out of salt spray and protect it from excessive moisture. If you use it at the beach, clean it thoroughly afterward with a dry cloth.

Do not touch the camera's electronic contacts with your fingers. Touching the contacts can cause corrosion and affect proper camera operation.

After removing a lens from the camera, place it face down on a flat surface to avoid damaging the electronic contacts on the lens mount.

Condensation is a problem when bringing cold equipment into a warm place. If the autofocus optics cloud over, accuracy may be seriously affected. Before entering a warm place, put equipment in a plastic bag so condensation forms on the outside of the bag.

Cleaning

1. Turn off the camera.
2. Disconnect the camera from the AC adapter and from the computer if they are connected.
3. Using a damp cloth, clean only the outside cabinet, the Top LCD panel, the Back LCD panel, and the Image Display.

☞ Do not use liquid cleaners or aerosol cleaners on the outside of the camera.

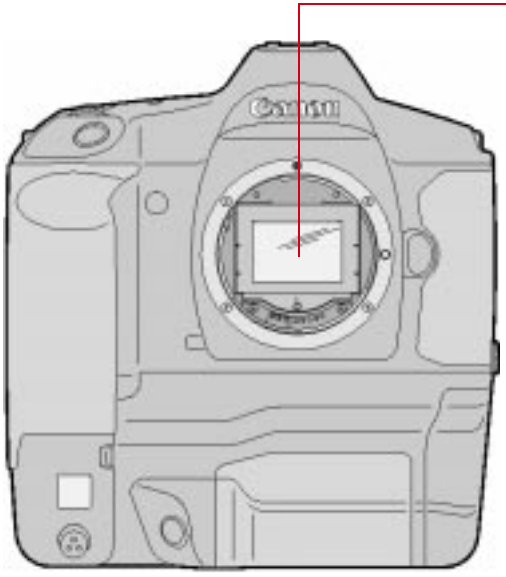
4. To remove dust from the lens, viewfinder eyepiece, mirror, or focusing screen, gently blow the dust away using a commercially-available bulb-type blower. Avoid directly touching any of these surfaces. Do not wipe the camera body or lens with any type of cleaner containing organic solvents. When further cleaning is necessary, consult your nearest service center.
5. The shutter curtain can be easily damaged if touched. To remove dust from the shutter curtain or surrounding area, use only a blower and be careful not to blow air onto the curtain too strongly as this could deform or damage the curtain. Aerosol spray dust removers are not recommended for the shutter curtain.

Anti-aliasing and IR Filters

Your camera contains an anti-aliasing or an IR filter. It may be necessary to remove the filter for cleaning. While it is not essential, you can wear lint-free, static-free gloves, available from your camera dealer.

The antialiasing or IR filter can accommodate a fair amount of dust before cleaning is necessary. It should be cleaned less often than the imager to avoid damage.

Removing, Cleaning, and Re-installing the Anti-aliasing Filter

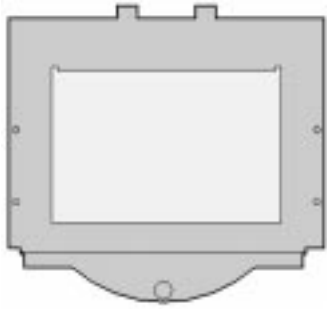


1 Turn off the camera.

2 Remove the lens from the camera.

☞ Be very careful when removing the filter, as it is a very fragile device.

3 Carefully unscrew the captive screw at the bottom of the filter bracket using a jewelers screwdriver.



4 Carefully remove the filter bracket from the camera.

5 Gently blow off the dust using commercially available “canned air.” If the filter is still dirty, please contact your dealer or service representative.

6 To re-install: place the filter bracket tabs into the upper two notches on the camera lens opening, and secure the screw at the bottom.

7 Carefully screw the captive screw. Do not overtighten or cross-thread the screw.

8 Replace the lens.

CAUTION: ⚠

If you should break the glass on the anti-aliasing or IR filter while it is in the camera, call your service representative. The broken glass can cause damage to the imager and other parts of the camera.

The Imager

The imager is the component of the camera that records light when you capture an image. If it should get dirty, the quality of your images can be affected.

Determining if the Imager is Dirty

Even though it is located inside the camera, it is still possible for the imager to become dirty. There are two ways to determine whether the imager needs cleaning:

- ✔ Capture a test image and look for imperfections that indicate dirt on the imager.
- ✔ Access, then visually inspect the imager for dirt.

Examining a Test Image

1. Connect your camera to your computer (page 12-2).
2. Set the lens aperture to its highest f stop to provide for maximum depth of field.
3. Capture an image of a plain white object, such a clean white wall.
4. Examine the image on the computer monitor. Imperfections in the image, such as dark clusters or streaks, may indicate a dirty imager.

Visually inspecting the Imager

1. Turn off the camera.
2. Remove the lens from the camera
3. Remove the anti-aliasing or IR filter (page 14-3).

> IMPORTANT:
>
> *Be very careful when removing the filter, as it is a very fragile device.*

4 Insert a battery if one is not in the camera (page 3-3).

5 Connect an AC adapter (page 3-13).

> CAUTION:
>
> **It is necessary to have two sources of power available to prevent the shutter closing unexpectedly and being ruined.**

6 Turn on the camera.

7 Select the Menu icon then choose Main menu from the dropdown menu (page 2-11).

8 Select Imager Clean from the Main menu.

If there is no battery in the camera or the camera is not connected to the AC adapter, a screen informs you. Insert a battery or connect the AC adapter, then select Retry.





If the battery and AC adapter are in place, the Open Shutter screen appears.



9 Select OK to proceed, or Cancel to cancel the process.

If you chose Cancel, you can turn off the camera and replace the anti-aliasing filter and lens.

If you chose OK, the mirror raises and the shutter opens.

The imager is visible through the lens mounting flange.

The Close Shutter screen appears.



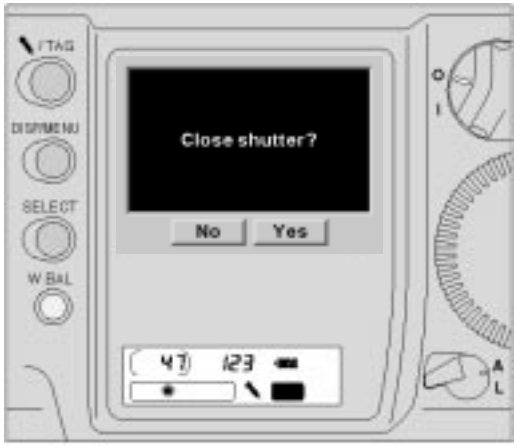
10 Hold the camera so that light reflects off the imager. Visually inspect the imager.

Cleaning the Imager

If the imager is dirty, please check the Kodak Web site for instructions.

Reassembling the Camera

You will need to reassemble your camera after inspecting or cleaning the imager.



1 Select Yes in the Close Shutter screen.

The mirrors lower and the shutter closes.

2 Turn off the camera.

3 Carefully replace the anti-aliasing or IR filter.

4 Replace the lens.

Storing

When storing your camera, wrap it in a clean, soft cloth and place it in a well-ventilated, cool, dry, dust-free place. Be sure to keep the camera out of direct sunlight, and away from “hot spots” such as the trunk or rear window shelf of a car. Avoid places where chemical agents such as moth balls are used, and in extreme humidity, use a desiccant. To prevent corrosion, avoid storing the camera in a laboratory or other location where chemicals are used. Also, do not store the camera in a drawer or other non-ventilated place. Remove the battery if you do not expect to use the camera for several days. It is also recommended to take the camera out and release the shutter occasionally to prevent build up of mold or corrosion.

A minute amount of battery power is used even when the Main switch is set to Off. This will affect the camera’s shooting capacity after several days of storage.

Carefully check the camera’s operation after lengthy storage. When the camera has not been used for a long time, or before an important trip or shooting assignment, we recommend having the camera thoroughly tested at an authorized service center.

Top and Back LCD panels

Liquid crystal may respond relatively slowly in temperatures below 32 degrees F (0 degrees C). It may also darken in temperatures of around 140 degrees F (60 degrees C). The LCD panels will return to normal function when the temperature returns to normal.

Installing Camera Firmware on Your Computer

Firmware is the software program which runs within the camera and controls its operation. As new firmware versions become available, you can access them from the Kodak Web site (http://www.kodak.com). You should check the Web site to see if new firmware is available.

☞ Before you update the firmware on your camera, you will first need to install it on your computer.

Download the firmware from the Kodak Web site. From the Kodak Home page, search for Digital Cameras, DCS 500 Series, and look for download instructions.

Updating Camera Firmware

Once you have downloaded the firmware to your computer, you can update the firmware on your camera.

There are two ways to update your camera's firmware:

- ✔ Use the DCS Host software
- ✔ Download from the PC Card

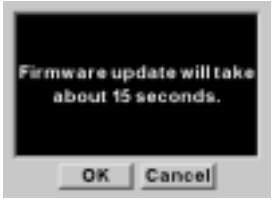
Refer to the KODAK PROFESSIONAL DCS Host Software User's Manual (on the CD included with your camera) for instructions on updating using the Host software.

Downloading From the PC Card

1. Download the firmware to your computer.
2. Insert a PC Card into the card reader on your computer.
3. On your computer, copy the firmware file (dcs5xx.bin) to the root directory of a PC Card. (Do not copy the file to a folder on the PC Card.)
4. Insert the card into your camera.









5 Select the Menu icon then choose Main menu from the dropdown menu (page 2-11).

6 Select Firmware from the Main menu.

7 *The Firmware screen appears.*

8 Select your choice.

If you choose Version, the version number of the firmware in the camera appears.

If you choose Update from card, a second screen appears.

9 Choose OK or Cancel.

If you choose Cancel, the firmware is not updated.

If you choose OK, approximately 15 seconds pass and a third screen appears.

10 Choose OK.

11 Turn your camera off, then on to start the new firmware.

Appendix A - Specifications

CAMERA AND MAJOR COMPONENTS	
Type:	Two models are available: DCS 520 and DCS 560. Both cameras combine 35mm focal plane shutter SLR (single-lens reflex) with autofocus, auto exposure, built-in digital functionality.
Format:	DCS 520: 1728 x 1152 pixels (22.5 x 15.1 mm) DCS 560: 3040 x 2008 pixels (18.1 x 27.4)
Usable Lenses:	Canon EF lenses
Lens Mount:	Canon EF mount (fully electronic signal transfer system)

VIEWFINDER	
Type:	Fixed eye-level pentaprism.
Coverage:	DCS 520: Gives 97% vertical and 98% horizontal coverage of actual picture area. DCS 560: Gives 97% vertical and 97% horizontal coverage of actual picture area.
Magnification:	0.834 (–1 dpt, with 50mm lens at infinity).
Standard diopter:	–1 dpt, built-in dioptric adjustment mechanism provided with adjustment range of –3 ~ +1 dpt (eyepoint: 20 mm).
Focusing Screen:	Interchangeable (9 types available); standard screen: Ec-CII.
Mirror:	Quick return half-mirror (Mirror blockage: None to 1200mm f/5.6)

VIEWFINDER	
Viewfinder Information:	1) Within viewing area: Five focusing points, fine spot metering area mark (with Ec-CII) 2) Below viewing area: Shutter speed, aperture value, ✻(AE lock, blinks at 2 Hz during AEB operation), **M** (manual), ⚡ (flash charge completion indicator), ⁺∕₋ (lights when exposure compensation or flash exposure compensation is set), ● (in-focus indicator, blinks at 8 Hz when AF is impossible) 3) To the right of viewing area: Exposure level scale (±3 stops in 1/3-stop increments), exposure level indicator (1) AE mode, exposure compensation amount, (2) AE lock, real-time meter deviation value, (3) manual exposure level, (4) AEB step amount, (5) background exposure when using flash).
Depth of Field Preview:	Possible, by operation of Depth-of-field Preview button.

EXPOSURE CONTROL	
Light Metering:	TTL full-aperture metering using a 12-zone SPC (silicon photocell). Five metering modes available: 1) Evaluative metering. 2) Partial metering covers approximately 23% (DCS 520) and 15% (DCS 560) of the central picture area 3) Fine spot metering covers approximately 6% (DCS 520) and 4% (DCS 560) of the central picture area. In continuous exposure mode, first frame metered in real time, second and successive frames shot at same settings (AE lock). 4) Spot metering covers approximately 9% (DCS 520) and 6% (DCS 560) of the picture area at each AF frame position. 5) Center-weighted average metering.

EXPOSURE CONTROL	
Shooting Modes:	1) Shutter-priority AE (1/3-stop increments) 2) Aperture-priority AE (1/3-stop increments) 3) Depth-of-Field AE 4) Intelligent Program AE 5) A-TTL program flash AE 6) TTL program flash AE 7) Manual exposure 8) Bulb 9) E-TTL Program Flash AE
Metering Range:	DCS 520: At normal temperature with 50mm f/1.4 lens at ISO 200: 1) Evaluative metering, partial metering: EV -1 ~ 19 2) Fine spot metering: EV 2 ~ 19 DCS 560: At normal temperature with 50mm f/1.4 lens at ISO 100: 1) Evaluative metering, partial metering: EV 0 ~ 20 2) Fine spot metering: EV 3 ~ 20
Usable ISO Range:	DCS 520: ISO 200 - 1600 DCS 560: ISO 80 - 200
Exposure Compensation	1) AEB: +/-3 stops in 1/3-stop increments, shot according to Drive mode in sequence of underexposure, correct exposure, overexposure; repeatable, can be used with self-timer for delayed 3-sequence exposure. 2) Manual compensation: +/- 3 stops in 1/3-stop increments, by independent operation of quick control dial or combination of exposure compensation button + main dial; can be used together with AEB.
AE Lock	1) Auto AE lock: occurs simultaneously with AF completion in One-shot AF mode with evaluative metering. 2) Manual AE lock is possible in all metering modes by pressing AE Lock button.

AUTOFOCUS	
AF Control System:	TTL-CT-SIR (Secondary Image Registration) phase detection type using Cross-type multi-BASIS (Base-Stored Image Sensor). Focus completion indicated by LED lamp and audible beep (Lamp blinks at 8 Hz when autofocusing is impossible; beep sound can be turned off)
Focusing Points:	Five focusing points provided.
Focusing Point Selection:	Selected automatically by camera or manually by user
Focusing Modes	1) One-shot AF: At focus completion, AF operation stops, AF lock occurs and the shutter release is enabled. 2) AI Servo AF: AF system tracks moving subject until immediately prior to exposure, includes predictive focusing function, shutter release enabled at all times (however, predictive focus control has priority in continuous exposure mode); in-focus indicator does not light when focus is achieved, but blinks at 8 Hz when autofocusing is impossible. 3) Manual focusing: Possible by setting the lens' focus mode switch to "**M**" and operating the lens' manual focusing ring. In-focus indicator lights up when focus is achieved (with EF lenses having maximum aperture of f/5.6 or larger).
AF Working Range:	DCS 520: EV -1 ~ 17 (ISO 200). DCS 560: EV 0 ~ 18 (ISO 100).

SHUTTER	
Type:	Vertical-travel, focal plane shutter with all speeds electronically controlled.
Shutter Speed:	1/8000 ~ 30 seconds. (in 1/3-stop increments) and bulb. Maximum X-sync speed: 1/250 second.
Shutter Release:	Soft-touch electromagnetic release.
Self-timer:	Electronically controlled with 2- or 10-second delay, selectable; operation indicated by blinking lamp (blinking speed: 2 Hz when first activated, increasing to 8 Hz for final two seconds); self-timer counted down in camera's LCD panel; can be automatically canceled by setting the main switch to (L).

CAMERA BODY	
Flash Contacts:	1) Accessory shoe: contact, directly-coupled contacts 2) PC terminal: JIS B socket (with lock screw) ☞ (1) and (2) can be used at the same time.

CAMERA BODY

Automatic Flash Exposure:

X-sync Shutter Speed and Aperture Settings
(with EOS dedicated Speedlites)

Shooting Mode	X-sync shutter speed	Aperture value
P (program AE)	Automatically set to 1/60 - 1/250 second. based on A-TTL or TTL program.	Automatically set according to A-TTL or TTL program
Tv (Shutter priority AE)	Manually set to any shutter speed of 1/250 or slower.	Automatically set according to ambient light level and shutter speed.
Av (Aperture priority AE)	Automatically set between 30 seconds and 1/250 second according to ambient light level and set aperture value.	Manually set to desired aperture.
M (Manual exposure)	Manually set to any shutter speed of 1/250 or slower.	Manually set to desired aperture.

If a shutter speed faster than 1/250 second is set, the camera automatically sets the shutter speed to 1/250 second.

Custom Function Control

Several built-in custom functions selectable by user:

3) Beeping when in focus
4) AF activation method
5) Manual shutter speed and aperture value setting method
6) Shutter speed, aperture value, exposure compensation, flash exposure compensation and AEB setting increments
7) Manual focusing using the electronic manual focusing ring
8) Selection of center-weighted average metering
9) AEB shooting sequence
10) Cancellation of superimposed focusing points
11) Focusing point selection method
12) Mirror up photography
13) Spot metering linked to focusing points
14) Flash output control.

Image Display

Displays one, four, or nine images, and provides menu choices for camera functions.

CAMERA BODY	
Top LCD panel	Displays necessary information including AF mode, Drive mode, metering mode, shutter speed, aperture value, ISO, and exposure compensation.
Back LCD panel	Displays information including current frame number, frames remaining, battery status, white balance, and sound recording information
Remote Control:	3-pin remote control socket provided.
Imager:	DCS 520: 2 million pixel imager which operates at 200 - 1600 ISO. DCS 560: 6 million pixel imager which operates at 80 - 200 ISO.
Microphone	Built-in microphone records sound in a.WAV file format at “telephone quality” 8-bits, 11 kilohertz, monaural.
PC-Card Slot	Designated to accept PC-Cards that support the PCMCIA “ATA” interface.
IEEE 1394 Connector	High-speed serial interface connector.
3-Pin Connector	For AC adaptor
Tripod Mount	1/4” 20 thread
Dimensions	Height: 174 mm, Width: 161 mm, Depth: 92 mm
Weight	1.65 kg (without battery, lens, or PC Card)

DRIVE MODE	
Drive Mode	Two modes are available: ▭ (single exposure) and ▭ (continuous exposure).

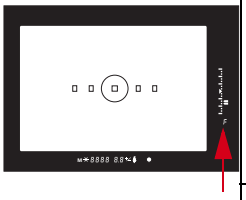
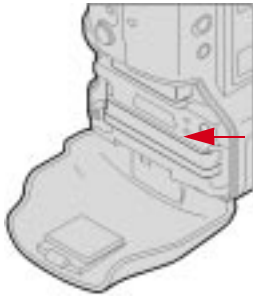
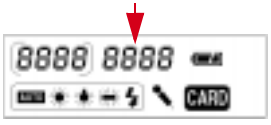
OTHER	
Kodak Software	For use with image editing software on Macintosh or PC
NiMH Battery	Single, rechargeable nickel metal hydride battery
NiCad Battery	Single, rechargeable nickel cadmium battery
AC Adapter	An alternative power source that allows you to conserve your battery while working indoors.
External Battery Charger	Charges one or two batteries

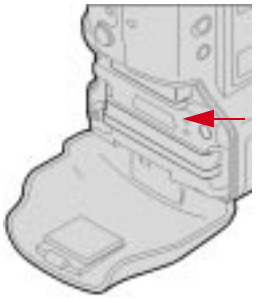
Appendix B - Troubleshooting

If you run into a problem operating your camera, check the following table to see if you can find the cause of the problem. If the trouble persists, take the camera to your nearest service representative.

Symptom	Cause	Remedy
Nothing appears in the Top LCD panel	The Main switch is set to (L).	
	The battery needs to be recharged.	Replace it with a charged battery or connect the camera to the AC adaptor.
The camera settings cannot be changed.	The Main switch is set to (L).	Set the Main switch to (**A**).
	The Quick Control dial switch is not set to |.	Set the Quick Control dial switch to (|).
Autofocusing does not operate.	The lens' Focus Mode switch is set to (**M**).	Set the lens' Focus Mode switch to (**AF**).
	Custom function F-4 is set to 1.	Press the AE Lock button to autofocus, or set custom function F-4 to 0 and press the Shutter button halfway.

Symptom	Cause	Remedy
The shutter does not release.	The Main switch is set to (**L**).	Set the Main switch to (**A**)
	The subject is not focused. (The in-focus indicator is blinking in the viewfinder.	Press the Shutter button again halfway. If the subject still cannot be focused, refer to “Difficult Subjects for Autofocus” in Chapter 8.
	The PC Card is full	Replace the PC Card or delete some images
	No PC Card in camera	Insert a PC Card
“ bc “ blinks in the Top LCD panel.	The camera has undergone some type of malfunction.	Remove the battery from the camera and reload it. If the blinking “ bc “ indicator disappears, the camera will operate normally. If the “ bc “ indicator does not stop blinking after repeating the above operation several times, there is a malfunction in the camera. Take the camera to your service representative.
The Frames Remaining indicator on the Back LCD panel reads 0.	The PC Card is full	Insert a different PC Card or delete some images from the PC Card.
The battery icon on the back LCD panel shows that the battery is low.	Battery is low	Recharge the battery, replace it with a freshly charged battery, or, if working indoors, connect the AC adaptor.
Exposed a burst of images and the Card icon continues to flash.	It takes time to save a burst of images.	Wait a few seconds.

Symptom	Cause	Remedy
The “F” does not appear at the right of the focusing screen. 	The camera is busy saving images.	Wait until the PC Card icon on the Back LCD panel and the red Card Busy light inside the Battery/PC Card door stop blinking.  
	There is no PC Card in the camera.	Insert a new PC Card.
	The PC Card is full.	Check the Remaining Frames icon on the Back LCD panel. If there are 0 frames remaining, insert a new PC Card or delete some images. 
	The battery has lost its charge.	Replace with a freshly charged battery.

Symptom	Cause	Remedy
The camera is “locked.” Nothing works.	The battery is not securely in place.	Remove then insert the battery.
	The camera needs to be reset.	Remove the battery. Open the Battery/PC Card door and gently insert a paper clip into the Reset button. Continue pressing the paper clip until a slight “click” is felt. 

Appendix C - Problem Report

KODAK PROFESSIONAL DCS 500 Series Digital Cameras

Customer Return Address

Name_____

Company_____

Address_____

_____

_____

City_____State_____Zip_____--_____

Phone ( ) _____

Equipment Description

Camera Serial Number -- K_____

(See the bottom of the camera next to “S/N.” The serial number begins with a “K.”)

Problem Description

_____

_____

_____

_____

_____

_____

_____

A

AC Adapter 3-12, 7-5, A-7
  Connecting 3-13, 7-5
Actuations 6-25
AE Lock 8-34, A-3
AF Mode. See Focus
Anti-aliasing Filter 2-20
  Effect on Focus 9-12
  Removing and Re-installing 14-3
Aperture Priority 8-17
  1-stop, 1/2-stop Increments 8-20
  Aperture Value Display 8-19
  Setting 8-17
Auto Exposure Bracketing 8-40
Autofocus 10-2, A-4
  Selecting Mode 7-3, 9-2

B

Back LCD Panel. See LCD Panels
Batteries 3-2, A-7
  Charging 3-7, 7-1
  Checking Status of 3-5
  Conditioning 3-9
  Conserving 3-10
  Inserting 3-3, 7-2
  Removing 3-3
Battery Charger 3-6, A-7
Baud Rate 13-2
Built-in Meter 8-26
Bulb Exposure 8-28
Buttons 2-17

C

Camera
  Care 13-1
  Handling 13-1
Camera Care 14-1
Camera Components A-1
Camera. See DCS 500 Series
Capturing Images 7-9
  Using the Vertical Controls 10-9
Card Reader 12-1, 12-4
Charging Batteries 3-7, 7-1
Cleaning Your Camera 14-2
Clock 6-1
Computer
  Connecting to 12-2
  Disconnecting From 12-4
Conditioning Batteries 3-9
Configuring Your Camera 6-1
Connecting to the Computer 12-2
Custom Functions 6-3, A-6
  Combining F-5 and F-11 6-18
  F-10 6-14
  F-11 6-14
  F-12 6-14
  F-13 6-16
  F-14 6-16
  F-3 6-6
  F-4 6-6
  F-5 6-8
  F-6 6-8
  F-7 6-10
  F-8 6-12
  F-9 6-12
  Resetting 6-5
  Resetting All 6-5, 6-20

D

Date and Time 6-1, 7-6
DCS 500 Series
  Back Controls 2-4
  Bottom Controls 2-5
  Dimensions A-7
  Front Controls 2-3
  Side Controls 2-6
  Top Controls 2-5
  Weight A-7
Deleting Images
  All in Folder or PC Card 11-12

Multiple 7-15, 11-12
Single Image 7-14, 11-11
Untagged Images in Folder or PC Card 11-12
Depth of Field 8-21, 9-11
Automatic Focusing Point Selection 8-24
Manual Focusing Point Selection 8-21
Dioptric Adjustment of the Viewfinder 6-2
Disconnecting From Your Computer 12-4
Display Contrast 7-11
Adjusting 7-11, 11-4
Display Options 7-12
Highlight 7-12, 11-6
Histogram 7-12, 11-7
Setting 11-6
Drive Mode A-7
Changing 10-3
Continuous Exposure 10-3
Selecting 7-4
Single Exposure 10-3

E

Electromagnetic Emissions 1-7
Evaluative Metering 8-31
Exposure Compensation 8-37, A-3
Setting 8-37
Eyepiece Shutter 10-6

F

Features 2-1
Fine Spot Metering 8-33
Firmware
Downloading from PC Card 14-9
Updating 14-9
Flash 8-44
A-TTL 8-50
Automatic Flash Exposure A-6
Canon EX-series Speedlites 8-45
Canon EZ, EG or E-Series Speedlites 8-50
FE Lock 8-46
Non-dedicated flash equipment 8-58
TTL 8-51
Flash Contacts A-5
Flash Exposure Compensation 8-54
Focus
AF Mode
Al Servo 9-3
Maximum Continuous Shooting Speed 10-4
One-Shot 9-2
Predictive Focus Control 9-4
Selecting 9-2
Automatic Focusing Point Selection Mode 8-24, 9-6
Checking the Depth of Field 9-11
Difficult Subjects for Autofocus 9-8
Five Focusing Points 9-5
Manual Focusing 9-10
Selecting a Focusing Point 9-5
Focus Lock 9-7
Folders
Selecting 4-8, 7-7, 7-9
Use Folder 1 6-25

H

Handling your Camera 14-1
Highlighting 7-12
Histogram 7-12

I

IEEE 1394 Cable 12-2
IEEE 1394 Connector A-7
Image Display
Overview 2-9, A-6
Timeout 3-11
Turning On 11-2
Image Files
File Type
Setting 7-7
Image Review Mode 11-1

Imager 14-4, A-7
Determining if Dirty 14-4
Overview 2-20
Installing Camera Firmware 14-9
IPTC Data Management 5-8
IR Filter 2-20
ISO
Setting 7-4, 8-10

J

JPEG Files 5-1

L

LCD Panels
Back LCD Panel 2-9, 14-8, A-7
Illuminating 2-21
Top LCD Panel 14-8, A-7
Lens A-1
Attaching 2-18, 7-3
Magnification 2-2
Removing 2-19
Lens Mount A-1
Light Metering A-2

M

Manual Exposure 8-26
Using Built-in Meter 8-26
Metering Mode 8-30
Evaluative Metering 8-31
Fine Spot Metering 8-33
Partial Metering 8-32
Selecting 7-3, 8-30
Metering Range A-3
Microphone A-7
Mirror
Locking Up 10-7

N

Neck Strap 2-22

P

PC Card Slot A-7
PC Cards 4-1
Determining if Busy 4-6
Formatting 4-6
Inserting 4-3, 7-2
Removing 4-3
Types 4-1
Precautions 1-4
Problem Report C-1
Processing
Changing Settings 5-5
Images 5-2
With 2 PC Cards 5-1
Program Line Characteristics 8-13
Program Shift Function 8-13
Properties 6-21
Custom Functions 6-26
Display Off Time 6-21
Powersave Time 6-25
Total Actuations 6-25
Use Folder 1 6-25, 6-26

Q

Quick Control Dial
General Usage 2-15

R

Reassembling Camera 14-7
Recovering Deleted Images 11-13
Resetting Camera Functions 6-19
Resolution 6-24
Reviewing Images 7-10, 11-2
Setting the Review Mode 7-10, 11-2

S

Selecting Images 7-10, 11-5
Self Timer 10-5
Serial In
    Mode 13-3
    Status 13-4
Serial Out Mode 13-5
Serial Port Options 13-2
Serial Port, Connecting 13-1
Sharpening 6-23
Shooting Mode 8-11, A-3
    Aperture-priority AE 8-17
    Bulb Exposure 8-28
    Depth-of-field AE 8-21
    Manual Exposure 8-26
    Program AE Mode 8-11
    Selecting 7-3, 8-11
    Shutter-priority AE 8-14
Shutter A-5
Shutter Button
    Pressing Completely 10-3
    Pressing Halfway 10-2
Shutter Priority. See Shutter Speed
Shutter Speed
    1-stop, 1/2-stop Increments 8-16
    Display 8-16
    Setting 8-14
Six Second Timeout 3-10
Sound Files
    Recording 7-16, 11-9
Storing Your Camera 14-8
System Requirements
    Macintosh 1-2
    Windows 1-2

T

Tagging Images 7-13, 11-8
TIFF Files 5-1
Time. See Date and Time
Top LCD Panel. See LCD Panels
Total Actuations 6-25
Troubleshooting B-1
Turning the Camera
    Off 3-1, 7-1
    On 3-1, 7-3

V

Vertical Controls. See Capturing Images
Viewfinder 2-14, A-1
    Dioptric Adjustment 6-2

W

Waking the Camera 7-4
Warnings 1-3
White Balance 7-7, 8-1
    Color Temperature 8-2
    Determining Current Settings 8-2
    Preset 7-7, 8-3
White Balance Settings
    Saving 8-9
Working 11-1



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